

# Performance Profiles of Major Energy Producers 2008



U.S. Energy Information Administration  
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# **Performance Profiles of Major Energy Producers 2008**

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**Energy Information Administration**  
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## Major Findings

This edition of *Performance Profiles* reviews financial and operating data for the calendar year 2008 and discusses important trends and emerging issues relevant to U.S. energy company operations. Major U.S.-based oil and natural gas producers and petroleum refiners submit the data in this report annually on Form EIA-28, the Financial Reporting System (FRS).

*FRS companies' net income declined to the lowest level since 2003.*

- Net income fell 32 percent (in constant 2008 dollars) to \$87 billion in 2008 from \$127 billion in 2007. Substantial reductions in oil and natural gas prices in the second half of 2008 slowed revenue growth while operating costs continued to rise sharply, resulting in a 7-percent decline in operating income. Reassessment of reserves and other assets, which are required by accounting standards, were based on much lower year-end prices in 2008. This resulted in significant reductions in the value of goodwill and other assets, which contributed to lower FRS earnings in 2008.
- FRS companies earned a 16-percent return on stockholders' equity (ROE) in 2008, considerably below the average of 25 percent from 2004 to 2007. Despite the large decline, the profitability of FRS companies continued to outpace industry benchmarks, averaging 7 percentage points higher than that of the Census Bureau's All Manufacturing Companies from 2000 to 2008, compared to an average 2 percentage points lower from 1985 to 1999.

*Upstream and downstream profits fell substantially in 2008.*

- Oil and natural gas production continued to be the most profitable business segment for FRS companies, contributing \$72 billion in net income, but this was a decline of 19 percent from 2007. Return on net investment in place (ROI) fell to 13 percent in 2008 from 17 percent in 2007.
- Net income in the refining/marketing segment fell 55 percent from 2007 for FRS companies. ROI for domestic and foreign refining/marketing were nearly identical in 2007, but in 2008, domestic ROI declined to 3 percent and foreign ROI increased to 26 percent, the highest since 1980. Crude oil price increases outpaced petroleum product prices in 2008, resulting in the first decrease in FRS companies' average domestic refining/marketing gross margin since 2004. Per-barrel operating costs, on the other hand, rose sharply to the highest level since 1986. This led to a 69-percent decline in the average domestic net refined product margin to \$1.48 per barrel, the lowest since 2002.

*Cash flow and capital expenditures increased in 2008, despite lower net income.*

- Cash flow from operations increased 13 percent from 2007 to \$220 billion in 2008, despite the decline in net income. Non-cash items contributed to lower net income but did not reduce cash flow. Proceeds from the sales of assets fell 26 percent from 2007 to the lowest level since 2004. FRS companies increased funds raised from equity security offerings to \$7 billion in 2008 from \$2 billion in 2007 while proceeds from issuing long-term debt increased by 2 percent.
- The largest use of cash was for capital expenditures, which increased 18 percent from 2007 to \$199 billion in 2008, second only to 2006 as the highest ever reported in the FRS survey. Funds used to reduce long-term debt fell 11 percent from the previous year and dividends declined 8 percent. While the amount of cash used to repurchase company stock reached a record high in the FRS survey for the fifth consecutive year, the increase in 2008 was less than 1 percent. Overall uses of cash exceeded sources, resulting in a decrease of \$3 billion in cash and cash equivalents.

*Upstream expenditures reach record level in 2008.*

- Expenditures for exploration, development, property acquisition, and production (E&P) increased 31 percent from 2007 to \$216 billion in 2008, the highest ever reported on the FRS survey. Acquisition expenditures more than doubled from 2007, and development expenditures reached the highest level ever in the FRS survey. Exploration expenditures jumped 19 percent to the highest since 1985 while expenditures for production rose 23 percent to the highest since 1982.

*Oil production declined and reserve additions grew; natural gas production increased and reserve additions fell.*

- Worldwide production of oil (crude oil and natural gas liquids combined) by the FRS companies declined in 2008. FRS companies' worldwide oil reserve additions increased 2 percent in 2008. The Former Soviet Union and Africa experienced large gains in reserve additions in 2008 while the U.S. Onshore and Canada suffered large declines. Significant downward revisions to reported 2008 reserves are largely driven by the Securities and Exchange Commission's (SEC) reserve reporting requirement to use year-end 2008 prices, which reflect a low point in the recent price history. Under new SEC guidelines, future reserve reporting will be based on prices that are more representative of annual average prices.
- Worldwide production of natural gas increased. Natural gas production increased in seven of the nine FRS regions, led volumetrically by the U.S. Onshore region. Worldwide natural gas reserve additions fell as the large decline in additions for the U.S. Onshore by itself exceeded increases from five foreign regions. The requirement to use year-end prices to assess reserves resulted in significant downward revisions in 2008.
- In 2008, FRS companies accounted for 41 percent of U.S. oil production and 43 percent of U.S. natural gas production.

*Finding and lifting costs continued to rise.*

- Average worldwide finding costs for FRS companies jumped 26 percent from the previous period to \$23.84 per barrel of oil equivalent (boe) in the 2006–2008 period (finding costs are averaged over a 3-year period). The large decline in reserve additions noted above combined with higher expenditures resulted in a 77-percent increase in U.S. Onshore finding costs. The U.S. Offshore region (\$64 per boe) and Europe (\$61 per boe) had the highest finding costs among the FRS regions.
- Lifting costs (also called production costs) increased 24 percent from 2007 to \$12.59 per boe in 2008. Direct lifting costs increased 14 percent while production taxes rose 50 percent. Finding and lifting costs combined increased 24 percent from the prior period to \$34.34 per boe in the 2006–2008 period.

*U.S. refining/marketing capital expenditures remained high; U.S. refinery capacity increased.*

- Capital expenditures for the FRS companies' domestic refining/marketing segment increased 24 percent from 2007 to \$26 billion in 2008 while foreign refining/marketing capital expenditures increased 11 percent. Companies reported substantial investments to expand capacity, increase the capability to process heavier crude oil, enhance the quality of products, improve operating efficiencies, and reduce emissions. From 2000 to 2008, average annual capital expenditures in the FRS domestic refining/marketing segment were twice that of 1990 to 1999, which reflects the improved return on investment in the past several years.
- FRS companies reported that their U.S. refinery capacity increased by almost 6 percent, which includes the addition of two refinery joint ventures to the FRS survey. FRS companies accounted for 77 percent of U.S. refining capacity in 2008.

# Financial Developments

The Energy Information Administration's (EIA) *Performance Profiles of Major Energy Producers 2008* provides a financial review and analysis of the domestic and worldwide activities and operations of the major U.S.-based energy-producing companies. *Performance Profiles* examines companies' operations on a consolidated corporate level, by individual lines of business, by major functions within each line of business, and by geographic regions. The report focuses on annual aggregate changes in profits, cash flow, and investment in the United States and international energy industry. It also explores changes in the majors' exploration and development expenditures, production, reserves additions, and refining costs and margins. The analysis in this report is based on detailed financial and operating data and information submitted each year to the EIA on Form EIA-28, the Financial Reporting System (FRS).

## Net Income and Profitability

Net income for FRS companies fell 32 percent (in constant 2008 dollars)<sup>1</sup> to \$87 billion in 2008 from \$127 billion in 2007 (**Table 1**). This was the lowest level of earnings since 2003 but remained higher than every year prior to 2004 (**Figure 1**). Substantial reductions in oil and natural gas prices in the second half of 2008 slowed revenue growth while operating costs continued to rise sharply, resulting in a 7-percent decline in operating income. FRS companies also reported smaller gains on the sales of property, plant, and equipment and lower earnings for affiliates of FRS companies that are not included in the operating data. These two factors were the primary contributors to the 31-percent decline in "Other Revenue" (**Table 1**).

Reassessment of reserves and other assets, which are required by accounting standards, were based on much lower year-end prices in 2008.<sup>2</sup> This resulted in significant reductions in the value of goodwill<sup>3</sup> and other assets, which had a huge impact on FRS earnings in 2008. Excluding the effect of asset write-downs and other special items, net income for FRS companies increased 15 percent to \$143 billion in 2008.

Goodwill impairments appear as operating expenses on the income statement, but they are not always tax deductible. So, despite significantly lower pre-tax income, income tax expense for FRS companies increased 14 percent to the highest level ever reported on the survey, and this further contributed to the decline in net income.

The FRS companies' return on stockholders' equity (ROE) fell to 16 percent in 2008. This was the lowest level since 2003 (**Figure 2**) and was considerably below the average of 25 percent from 2004 through 2007. Despite the large decline, the profitability of FRS companies continued to outpace industry benchmarks (**Figure 3**). The FRS companies' ROE averaged 7 percentage points higher than that of the Census Bureau's All Manufacturing Companies from 2000 to 2008, compared to an average 2 percentage points lower from 1985 to 1999.

Among the FRS companies' lines of business and business segments, oil and natural gas production continued to be the most profitable, contributing \$72 billion in net income in 2008 (**Table 2**), although this was a decline of 19 percent from the 2007 level. Revenues continued to increase as oil and natural gas prices rose sharply in the first half of 2008. Operating expenses, however, also increased and asset impairments affected the bottom line as well.

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<sup>1</sup> Unless otherwise indicated, all dollar values and percentage changes in this report are based in constant 2008 dollars, adjusted using the gross domestic product (GDP) deflator.

<sup>2</sup> For more information, see the Oil and Natural Gas Production section of this report and Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Proved Reserves, 2008*, [http://www.eia.doe.gov/oil\\_gas/natural\\_gas/data\\_publications/crude\\_oil\\_natural\\_gas\\_reserves/cr.html](http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/crude_oil_natural_gas_reserves/cr.html).

<sup>3</sup> Goodwill occurs when the price paid for an acquisition exceeds the estimated value of the assets purchased. Goodwill is reassessed each year and, if the estimated fair value of the business segment with goodwill is below the recorded net book value, then a write-down (i.e., impairment) of the recorded goodwill may be required.

**Table 1. Consolidated Income Statement for FRS Companies, 2007-2008**  
(Billion 2008 Dollars)

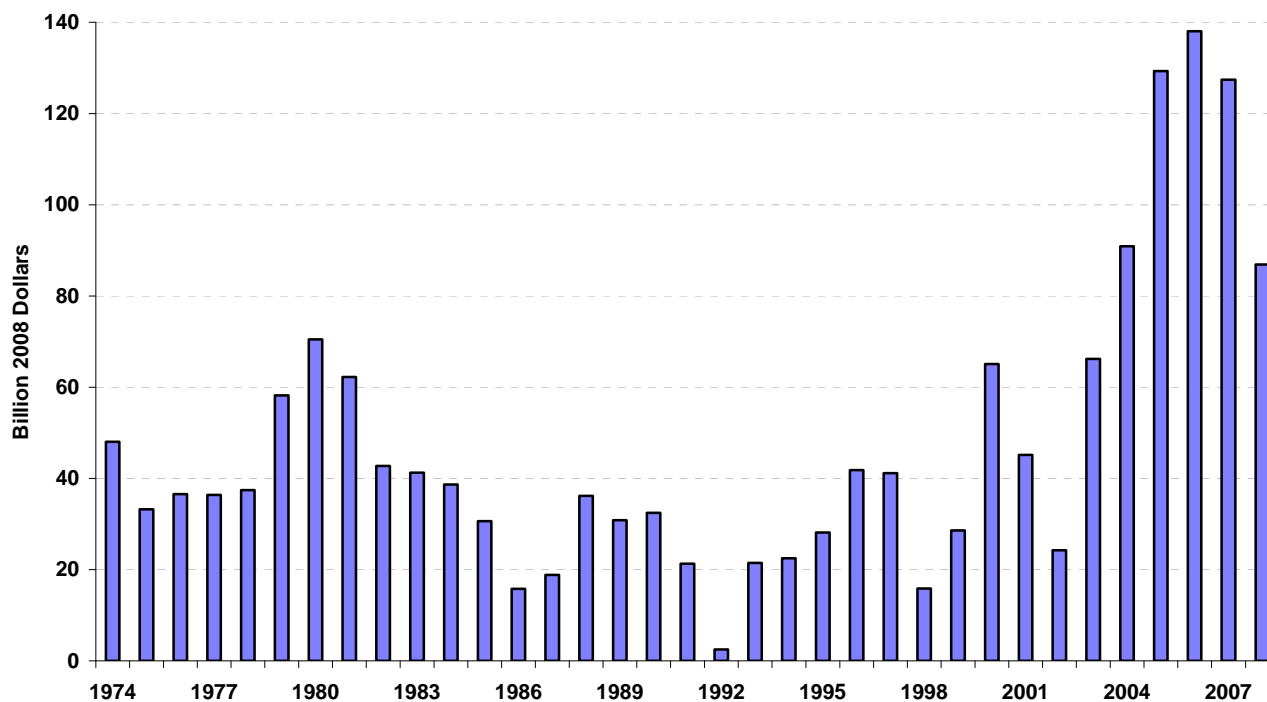
Income Statement Items	FRS Companies		
	2007	2008	Percent Change 2007-2008
Operating Revenues	1,475.0	1,818.1	23.3
Operating Expenses	1,297.7	1,654.0	27.4
Operating Income (Revenues minus Expenses)	177.3	164.1	-7.4
Interest Expense	11.1	11.4	2.7
Other Revenue (Expense)	47.5	32.6	-31.3
Income Tax Expense	86.3	98.5	14.1
Net Income	127.4	86.9	-31.8
Net Income Excluding Special Items	124.5	143.4	15.2

Note: Sum of components may not equal total due to independent rounding. Percent changes were calculated from unrounded data.

NA= not available.

Source: Energy Information Administration Form EIA-28 (Financial Reporting System).

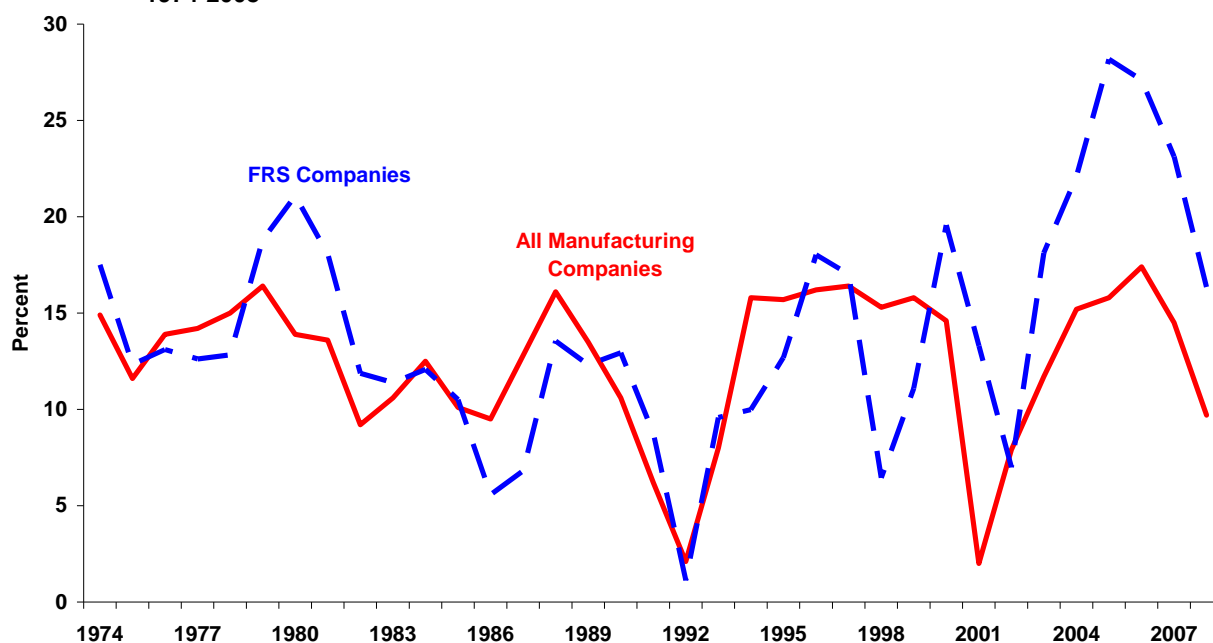
**Figure 1. FRS Net Income, 1974-2008**



Note: The FRS group of companies has changed incrementally over the years.

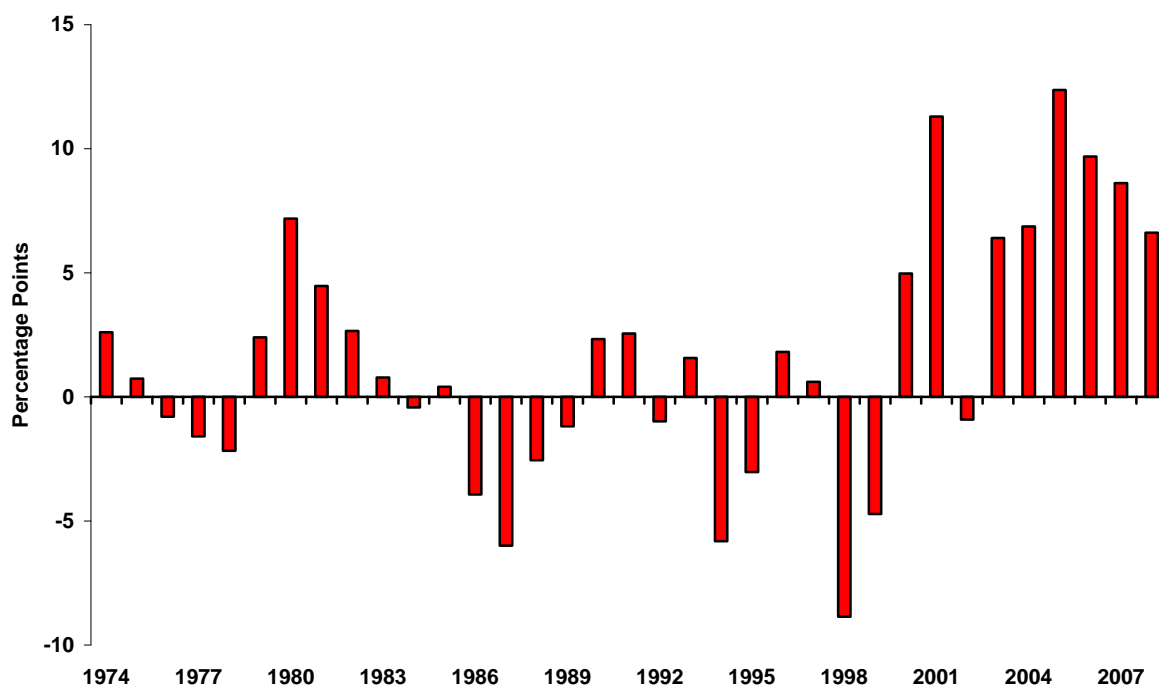
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Figure 2. Return on Stockholders' Equity for FRS Companies and All Manufacturing Companies, 1974-2008**



Sources: **FRS Companies:** Energy Information Administration, Form EIA-28 (Financial Reporting System). **All Manufacturing Companies:** U.S. Census Bureau Quarterly Financial Report, All Manufacturing Companies.

**Figure 3. Difference Between FRS and All Manufacturing Companies Return on Stockholders' Equity, 1974-2008**



Sources: **FRS Companies:** Energy Information Administration, Form EIA-28 (Financial Reporting System). **All Manufacturing Companies:** U.S. Census Bureau Quarterly Financial Report, All Manufacturing Companies.

**Table 2. Contributions to Net Income by Line of Business for FRS Companies, 2007-2008**  
(Million 2008 Dollars)

Line of Business	Net Income			Net Income Excluding Special Items		
	2007	2008	Percent Change 2007-2008	2007	2008	Percent Change 2007-2008
Petroleum						
U.S. Petroleum						
Oil and Natural Gas Production	40,911	32,298	-21.1	38,023	51,942	36.6
Refining/Marketing	22,862	3,339	-85.4	21,787	8,855	-59.4
Pipelines	266	238	-10.4	279	239	-14.2
Total U.S. Petroleum	64,039	35,875	-44.0	60,090	61,036	1.6
Foreign Petroleum						
Oil and Natural Gas Production	48,009	39,768	-17.2	50,492	65,891	30.5
Refining/Marketing <sup>a</sup>	9,398	11,100	18.1	8,624	11,328	31.3
Total Foreign Petroleum	57,408	50,868	-11.4	59,117	77,218	30.6
Total Petroleum	121,445	86,743	-28.6	119,206	138,255	16.0
Downstream Natural Gas	8,982	3,549	-60.5	7,970	3,463	-56.6
Electric Power	-1,595	9,311	683.6	-1,402	9,311	764.4
Other Energy <sup>b</sup>	800	-324	-140.5	800	1,176	47.0
Nonenergy	5,746	-2,361	-141.1	6,039	1,305	-78.4
Total Allocated	135,378	96,918	-28.4	132,613	153,510	15.8
Nontraceable <sup>c</sup>	-7,942	-10,006	26.0	-8,137	-10,085	23.9
Consolidated Net Income <sup>d</sup>	127,436	86,912	-31.8	124,476	143,424	15.2

<sup>a</sup>International Marine is included in Refining/Marketing.

<sup>b</sup>The Other Energy line of business includes coal, nuclear, and non-conventional energy.

<sup>c</sup>Revenues and expenses that cannot be directly attributed to a line of business.

<sup>d</sup>The total amount of special items was \$2,959 million and -\$56,512 million in 2007 and 2008, respectively.

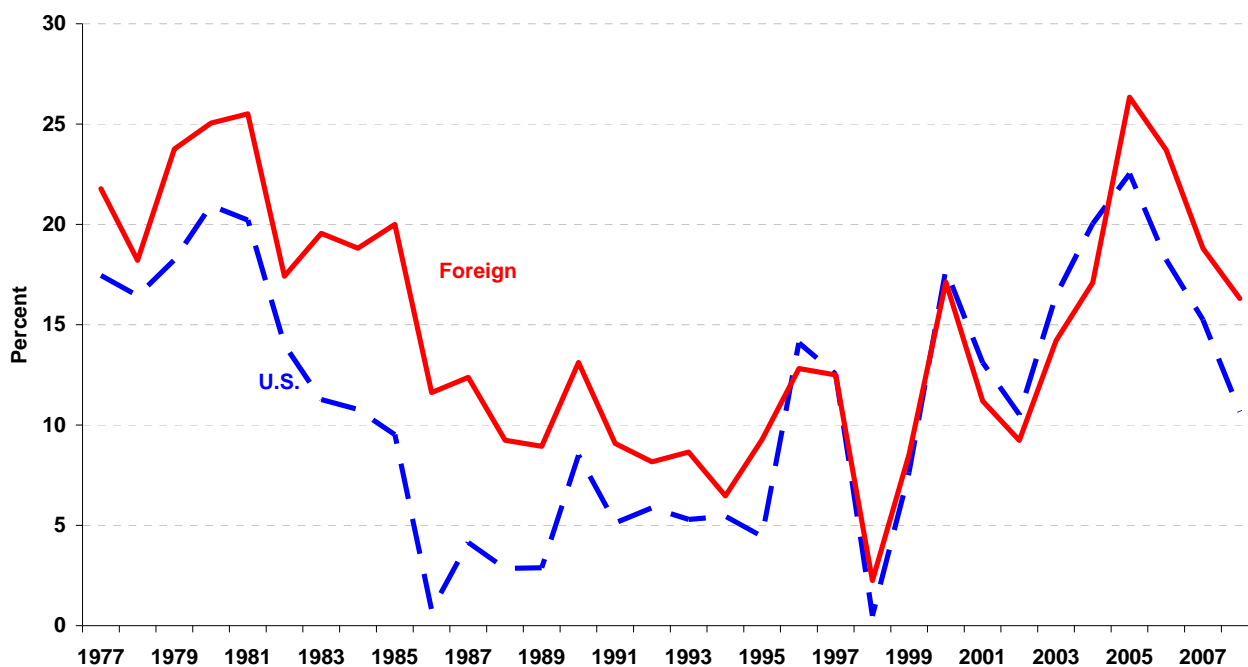
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Return on net investment in place (ROI) for the oil and natural gas production segment fell to 13 percent in 2008 from 17 percent in 2007. The difference between domestic and foreign ROI widened as domestic oil and gas production ROI fell to 11 percent, the lowest level since 2002 (**Figure 4**).

The refining/marketing segment provided \$14 billion in earnings in 2008, a decrease of 55 percent from 2007. The domestic and foreign refining/marketing segments went in opposite directions in 2008. Earnings for domestic refining/marketing fell to \$3 billion in 2008 from \$23 billion in 2007 while foreign refining/marketing net income reached \$11 billion, a record high for the FRS survey. ROI for domestic and foreign refining/marketing were nearly identical in 2007, but in 2008, domestic ROI declined to 3 percent and foreign ROI increased to 26 percent, the highest since 1980 (**Figure 5**).

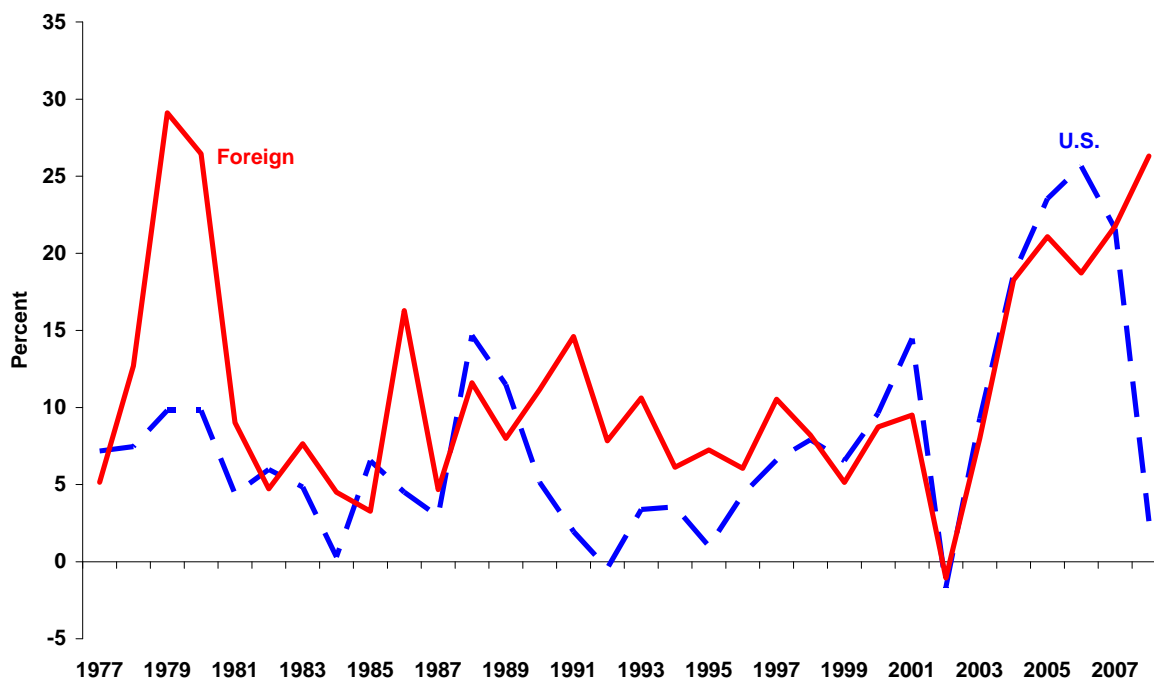
Crude oil price increases outpaced petroleum product prices in 2008, resulting in the first decrease in FRS companies' average domestic refining/marketing gross margin since 2004. Per-barrel operating costs, on the other hand, jumped 24 percent from 2007 to the highest level since 1986 (**Figure 6**). The combination of the lower average gross margin and higher operating costs led to a 69-percent decline in the average domestic net refined product margin to \$1.48 per barrel in 2008, the lowest since 2002.

**Figure 4. Return on Net Investment in Place for U.S. and Foreign Oil and Natural Gas Production for FRS Companies, 1977-2008**



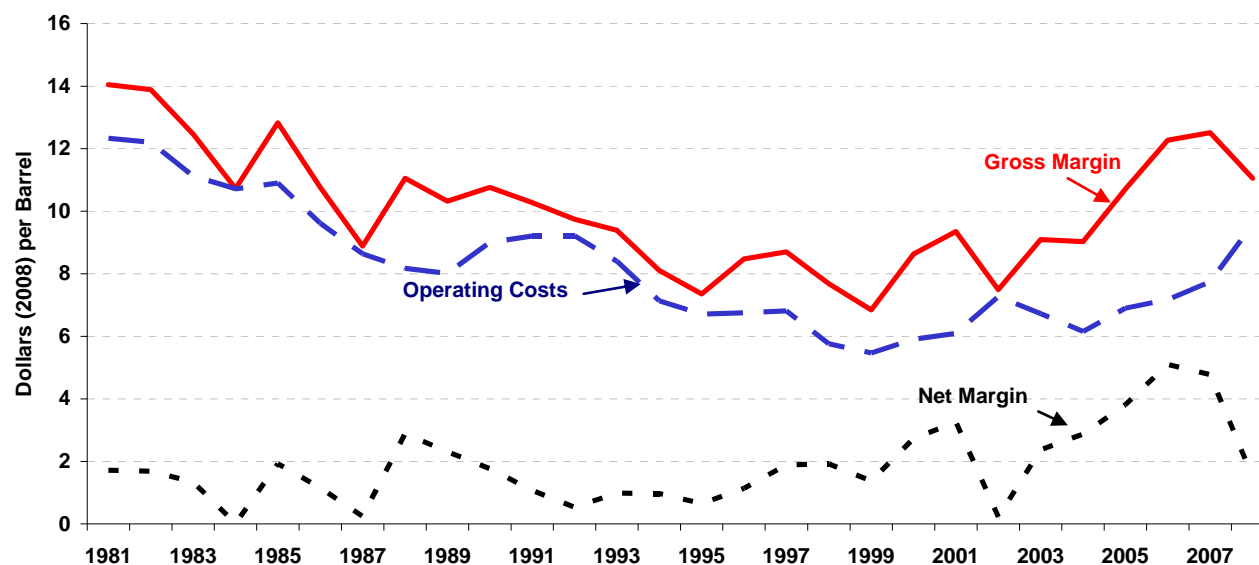
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Figure 5. Return on Net Investment in Place for U.S. and Foreign Refining/Marketing for FRS Companies, 1977-2008**



Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Figure 6. U.S. Refined Product Margins and Costs per Barrel of Petroleum Product Sold for FRS Companies, 1981-2008**



Note: The gross margin is refined product revenues less raw material cost and product purchases divided by refined product sales volume.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Net income for the electric power line of business increased to \$9 billion in 2008 after showing a loss in 2007. The downstream natural gas line of business went in the opposite direction with earnings declining 60 percent to \$3.5 billion. The marketing/trading segments of each line of business heavily influenced the results. The non-energy line of business reported a loss of \$2.4 billion in 2008. Chemical operations account for a large portion of the non-energy line of business. Lower margins, lower sales volumes, higher operating costs, and asset write-downs were cited as reasons for lower chemical earnings.<sup>4</sup>

## Cash Flow and Capital Expenditures

The cash flow statement provides information on sources and uses of cash, with sections for operations, investing activities, and financing activities. Cash flow from operations consists of net income after taxes plus depreciation and other noncash expenses. Investing activities include the net effect of buying and selling property, plant, and equipment. Financing activities include the net effect of issuing and purchasing company stock, issuing and paying off debt, and paying dividends. Major sources of cash include cash flow from operations, sales of assets, and proceeds from issuing debt or equity. Primary uses of cash include making capital expenditures, paying dividends, purchasing company stock, and paying off debt. Capital expenditures represent the value of assets acquired in the current time period net of depreciation and also include investments and advancements to unconsolidated affiliate companies. This report also refers to capital expenditures as additions to investment in place. The current cash flow statement was added to the survey in 1986.

<sup>4</sup> Energy Information Administration, *Financial News for Major Energy Companies, Fourth Quarter 2008* (February 2009), p. 5, available at [http://www.eia.doe.gov/emeu/perfpro/news\\_m/q408.pdf](http://www.eia.doe.gov/emeu/perfpro/news_m/q408.pdf) (as of October 11, 2009).



Cash flow from operations increased 13 percent from 2007 to \$220 billion in 2008 (**Table 3**), despite the decline in net income. Non-cash items, in particular asset and other impairments, contributed to lower net income but did not reduce cash flow. In the operations section of the cash flow statement, non-cash items are added to net income to calculate cash flow from operations. Two of these items, depreciation, depletion, and amortization (DD&A) and changes in operating assets, increased substantially from 2007 and led the increase in cash flow from operations. Impairments significantly affected both of these items.

**Table 3. Sources and Uses of Cash for FRS Companies, 2007-2008**  
(Billion 2008 Dollars)

Sources and Uses of Cash	2007	2008	Absolute Change 2007-2008	Percent Change 2007-2008
<b>Main Sources of Cash</b>				
Cash Flow from Operations	195.1	219.9	24.8	12.7
Proceeds from Long-Term Debt	74.3	75.7	1.3	1.8
Proceeds from Disposals of Assets	34.1	25.4	-8.7	-25.6
Proceeds from Equity Security Offerings	2.1	7.3	5.2	241.3
<b>Main Uses of Cash</b>				
Additions to Investment in Place	168.1	198.8	30.7	18.2
Reductions in Long-Term Debt	64.6	57.7	-6.8	-10.6
Dividends to Shareholders	34.0	31.5	-2.6	-7.5
Purchase of Treasury Stock	55.3	55.6	0.3	0.5
<b>Net Change in Cash and Cash Equivalents</b>	<b>5.1</b>	<b>-2.9</b>	<b>-8.0</b>	<b>-156.8</b>

Percent changes were calculated from unrounded data.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

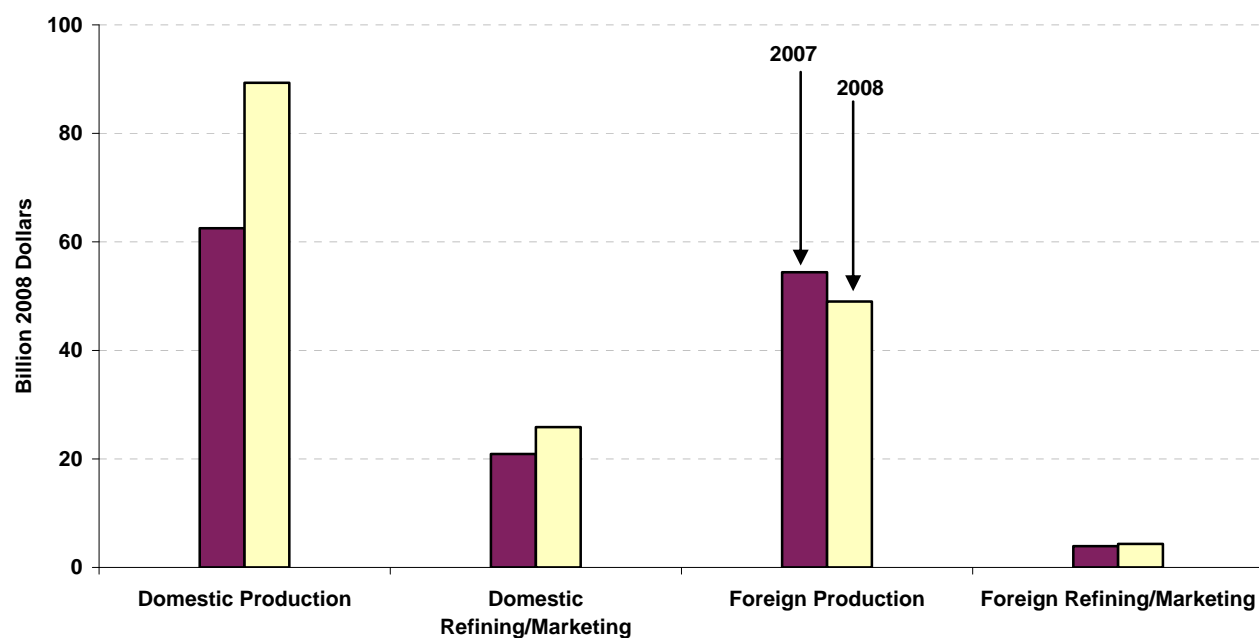
Capital expenditures remained the largest use of cash, increasing 18 percent to \$199 billion in 2008, second only to 2006 as the highest ever reported in the FRS survey. Oil and natural gas production (domestic and foreign combined) accounted for 70 percent of the total and refining/marketing 15 percent. Domestic oil and natural gas production capital expenditures jumped 43 percent in 2008 from 2007 while foreign upstream capital expenditures fell 10 percent (**Figure 7**).

The cash flow statement for the FRS companies in 2008 began to show the impact of the economic downturn. Funds used to reduce long-term debt fell 11 percent from the previous year, and dividends declined 8 percent. While the amount of cash used to repurchase company stock reached a record high in the FRS survey for the fifth consecutive year, the increase in 2008 was less than 1 percent.

Lower oil and natural gas prices during the latter half of 2008 may have also affected asset sales, which had risen substantially in the high price environment of recent years. In 2008, proceeds from the disposals of assets fell 26 percent from 2007 to the lowest level since 2004. Proceeds from issuing long-term debt increased by 2 percent, which, combined with lower debt reductions, resulted in an increase in the debt-to-equity ratio to 36 percent, the first rise since 2002. FRS companies also increased funds raised from equity security offerings, which jumped to \$7 billion in 2008 from \$2 billion in 2007.

Overall, net uses of cash from investing activities rose substantially to \$161 billion in 2008 from \$106 billion in 2007 (**Figure 8**). Merger and acquisition activity increased along with other investments in property, plant, and equipment (**Figure 9**). Net uses of cash for financing activities decreased to \$59 billion from \$87 billion as a result of lower reductions in long-term debt and an increase in equity offerings. Total uses of cash exceeded sources, resulting in a decrease of \$3 billion in cash and cash equivalents.

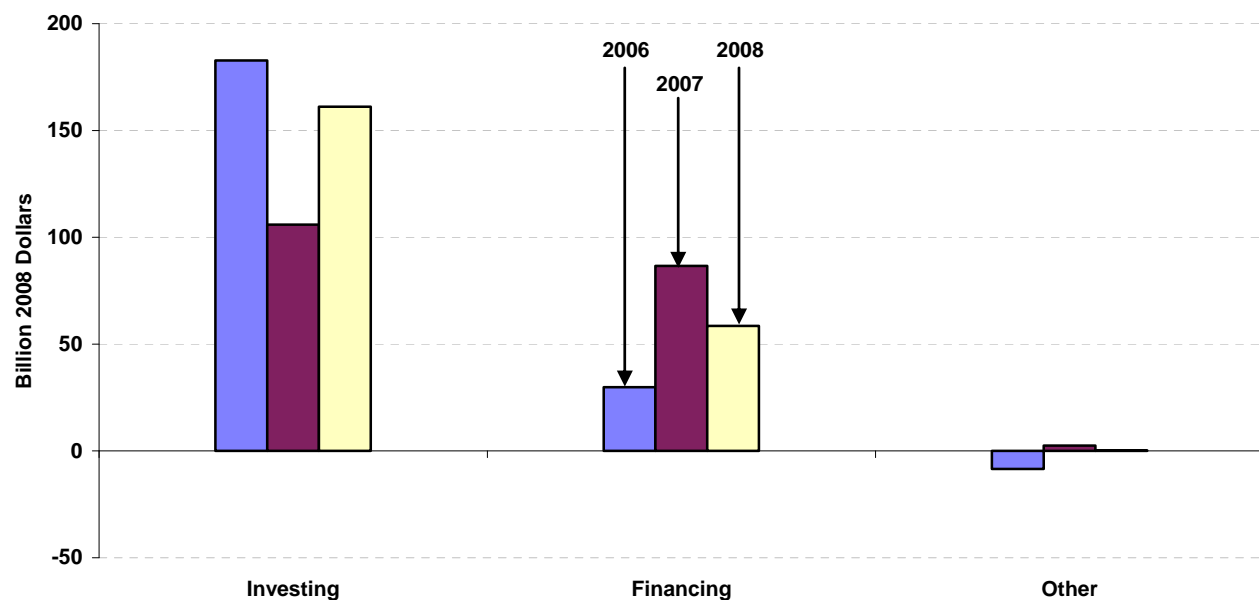
**Figure 7. FRS Companies' Capital Expenditures by Petroleum Business Segment, 2007-2008**



Capital Expenditures - additions to property, plant and equipment plus additions to investments and advances to unconsolidated affiliates.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

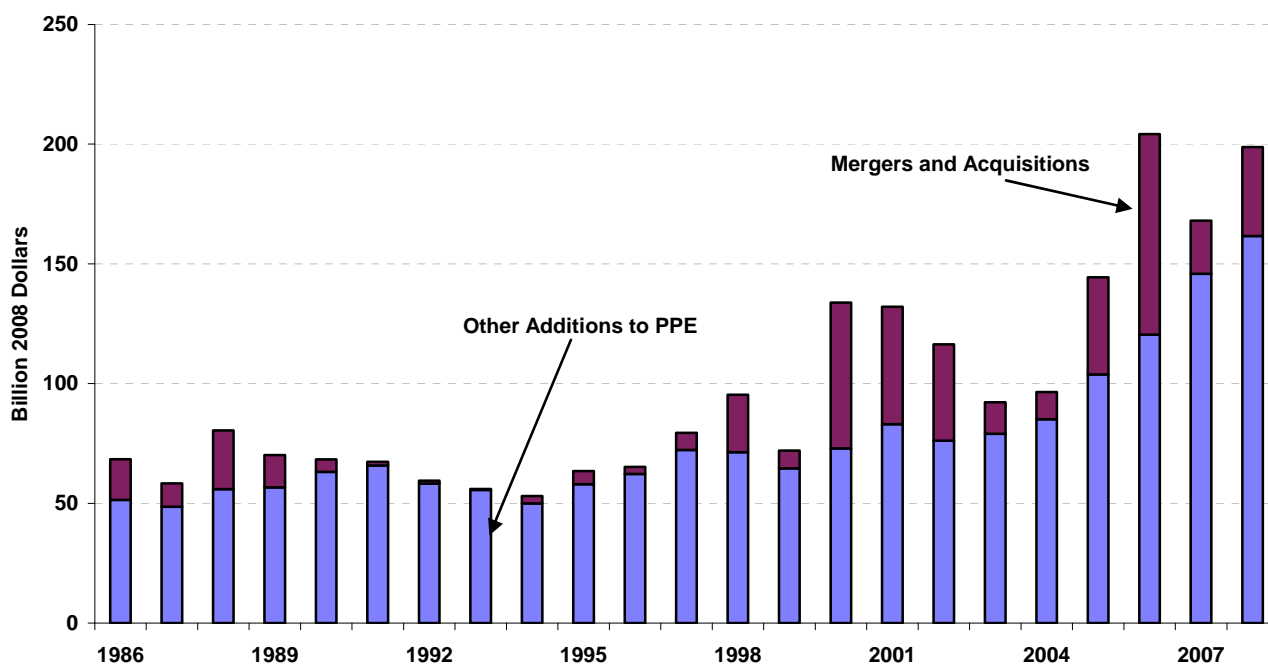
**Figure 8. FRS Companies' Net Uses of Cash Flow, 2006-2008**



Investing - buying and selling property, plant, and equipment. Financing - issuing and purchasing company stock, issuing and paying off debt, and paying dividends.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Figure 9. FRS Capital Expenditures, 1986-2008**



PPE - property, plant, and equipment.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

## Oil and Natural Gas Production Expenditures

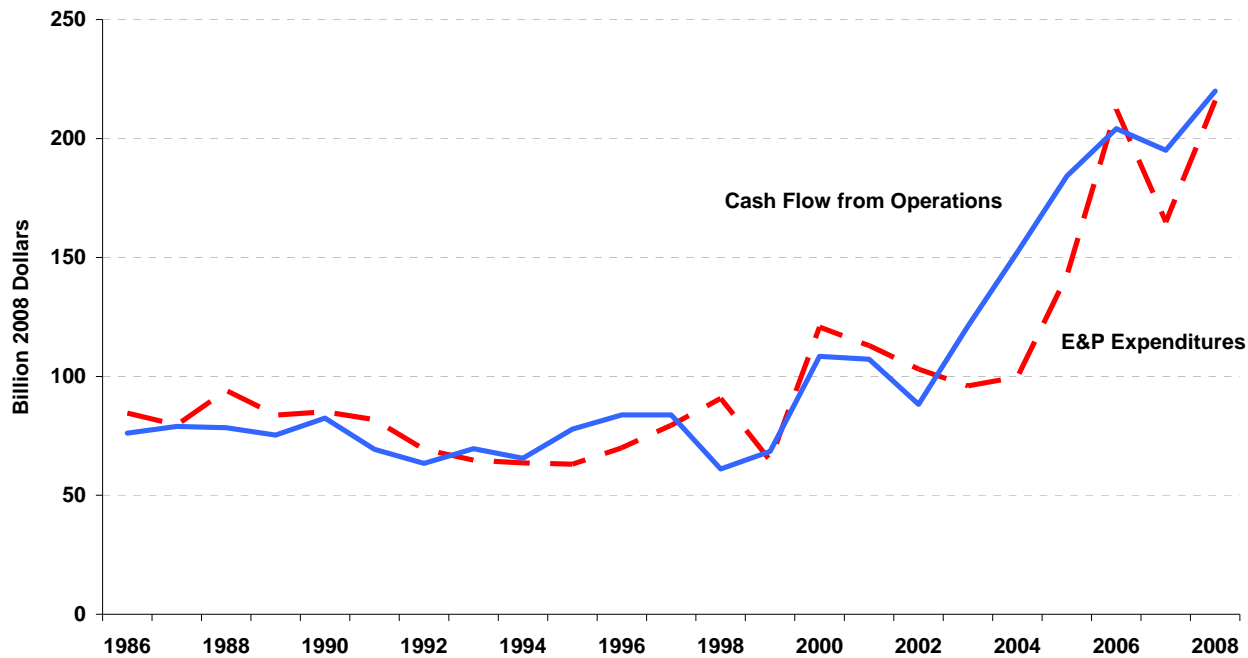
In addition to capital expenditures, FRS companies report expenditures for unproved and proved property acquisition, exploration, development, and production (E&P) for the oil and natural gas production segment. The data include current and capital expenditures, but capital expenditures predominate.

E&P expenditures increased 31 percent from 2007 to \$216 billion in 2008, the highest ever reported on the FRS survey (**Figure 10**). Expenditures for unproved and proved property acquisitions accounted for 19 percent of the 2008 E&P expenditures, development expenditures comprised 42 percent, production added 32 percent, and expenditures for exploration accounted for 8 percent.

Compared to the 2007 level, development expenditures increased 16 percent to \$90 billion in 2008. For the fourth year in a row, development expenditures reached the highest level ever in the FRS survey (**Figure 11**). Exploration expenditures jumped 19 percent to \$17 billion, the highest since 1985. Expenditures for production rose 23 percent to \$69 billion in 2008, which was the highest since 1982.

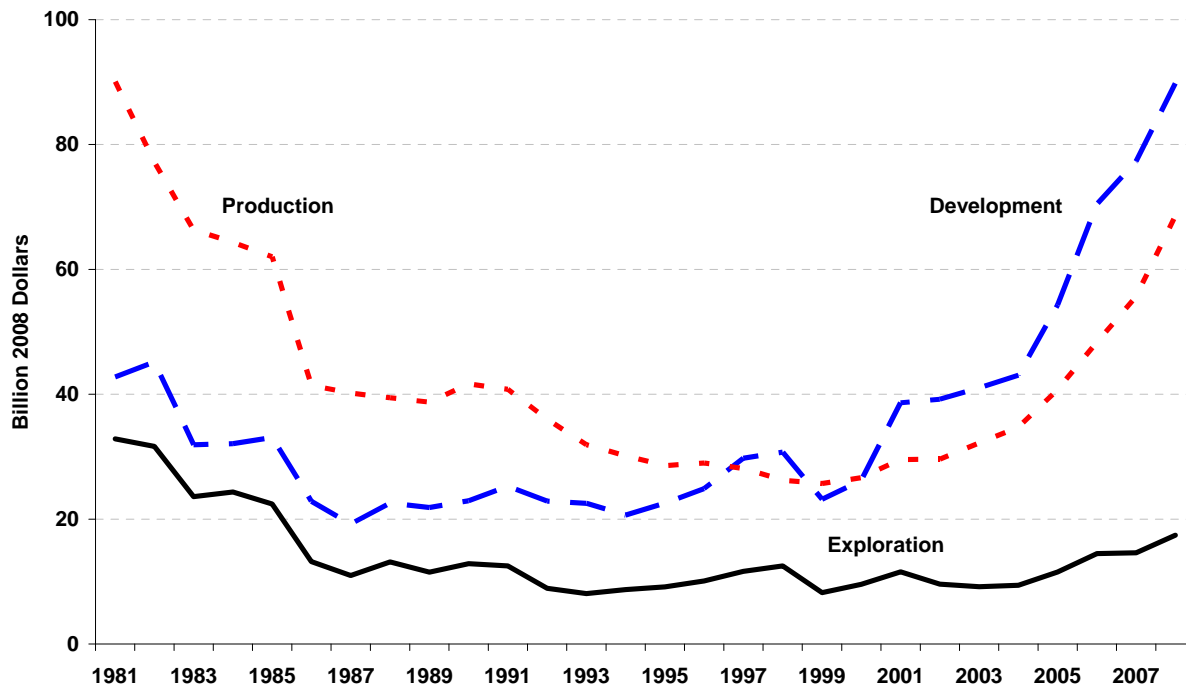
Regional expenditures are also reported, which provide insight into trends in upstream investment by FRS companies across world regions. The U.S. Onshore remains the most active region for the FRS companies' oil and natural gas operations. Expenditures for exploration and development (excluding expenditures for acquisitions) in the U.S. Onshore region increased 22 percent from 2007 to \$45 billion in 2008 (**Figure 12**), which was nearly three times the level in 2004. Expenditures for development predominate in the U.S. Onshore region, rising to \$40 billion in 2008, which was 44 percent of FRS companies' development expenditures worldwide. Exploration expenditures, though considerably smaller than development expenditures, increased 29 percent in 2008 to \$5 billion and, for the first time since 1990, FRS companies spent more for exploration in the U.S. Onshore region than in any other FRS region.

**Figure 10. Cash Flow from Operations and Exploration and Production (E&P) Expenditures for FRS Companies, 1986-2008**



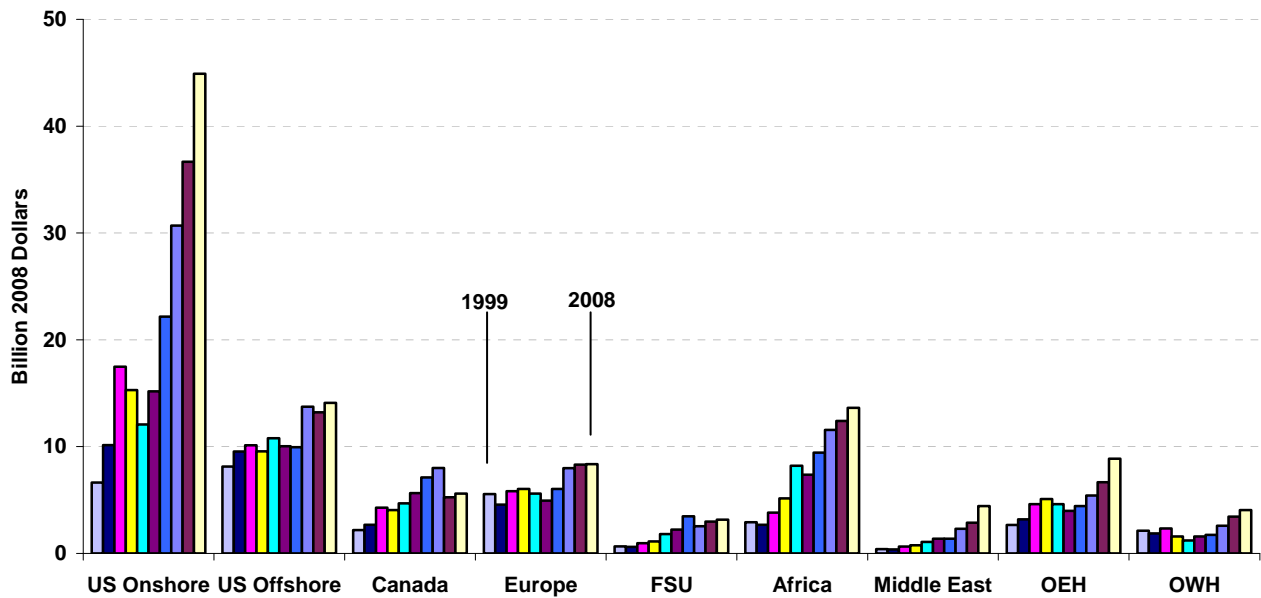
Note: E&P expenditures includes exploration, development, production, unproved acreage, and proved acreage expenditures.  
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Figure 11. FRS Worldwide Expenditures for Exploration, Development, and Production, 1981-2008**



Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Figure 12. FRS Expenditures for Oil and Natural Gas Exploration and Development by Region, 1999-2008**



Note: FSU is Former Soviet Union. OEH is Other Eastern Hemisphere, which is primarily the Asia Pacific region. OWH is Other Western Hemisphere, which is primarily Central and South America and the Caribbean.  
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Chesapeake is one of the largest natural gas producers in the United States. Its strategy is to discover, acquire, and develop conventional and unconventional natural gas reserves onshore in the United States, primarily in the Barnett, Haynesville, Fayetteville, and Marcellus shale plays.<sup>5</sup> A study by the Natural Gas Supply Association credited technological advances in drilling and completion methods for improving recovery rates in unconventional natural gas fields.<sup>6</sup> Devon is the largest producer in the Barnett Shale and is evaluating its leases in the Cana-Woodford, Haynesville, and Cody plays through a combination of seismic evaluation, mapping, drilling, and data analysis.<sup>7</sup>

While unconventional natural gas has received considerable attention, oil remains an important component of onshore exploration and development. EOG Resources' Chief Executive Mark Papa described the Bakken Shale as having "the most upside [potential] of any onshore oil play in the US currently." EOG has allocated 40 percent of its 2009 capital spending program to Bakken and other oil plays, up from 30 percent in 2008.<sup>8</sup> XTO Energy expanded into Bakken through the acquisition of properties from Headington Oil<sup>9</sup> (Table 4).

Exploration and development expenditures in the U.S. Offshore region increased 7 percent from 2007 to \$14 billion in 2008, the highest level since 1982. Gulf of Mexico operators made 15 deepwater discoveries and started production from seven new projects in water depths greater than 1,000 feet of water.<sup>10</sup> BP began producing from its Thunder Horse field, processing the oil at the Thunder Horse floating platform located 150 miles offshore.<sup>11</sup>

<sup>5</sup> Chesapeake Energy Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K filing, p. 35.

<sup>6</sup> "Gas Output Hits Highest Level Since 1970s," *Oil Daily* (October 8, 2008), p. 1.

<sup>7</sup> Devon Energy Corporation, 2008 *Summary Annual Report*, pp. 10-11.

<sup>8</sup> "Bakken Shale Play Looks Set to Thrive Despite Fall in Oil Prices," *Oil Daily* (January 5, 2009), p. 5.

<sup>9</sup> XTO Energy, Inc., 2008 *Annual Report*, p. 4.

<sup>10</sup> "Rebound Projected in US Gulf Oil Output," *Oil Daily* (May 6, 2009), p. 1.

<sup>11</sup> BP plc, *Annual Review 2008*, pp. 16-17.

**Table 4. Reported Value of Mergers, Acquisitions, and Related Transactions by FRS Companies, 2008**  
(Million Dollars)

Acquiring Company	Assets Acquired	Reported Value of Acquisition
ConocoPhillips	Asia Pacific LNG project with Origin Energy	4,700
XTO	Properties from Hunt Petroleum	4,200
Occidental	Oil and Gas properties from Plains Exploration	2,700
BP	Canada Oil Sands with Husky Energy, Inc.	2,500
BP	Certain Haynesville assets from Chesapeake	1,900
XTO	Properties from Headington Oil Co	1,850
BP	Certain Woodford assets from Chesapeake	1,750
XTO	Barnett Shale properties from Hollis R. Sullivan, Inc	800
Occidental	Libyan Signatory	750
Devon	Upstream Assets from Chevron (Drunkard's Wash)	681
XTO	Marcellus Shale properties from Linn Energy Holdings	600
Occidental	Joslyn Canadian oil sands project from Enermark, Inc	538
XTO	Fayetteville Shale properties from SEECO, Inc	520

Sources: Company annual reports to shareholders and press releases.

Chevron was involved in several exploration and development projects in the Gulf of Mexico. Its Blind Faith project began production in the fourth quarter of 2008.<sup>12</sup>

Exploration and development expenditures in foreign FRS regions increased 15 percent from 2007 to \$48 billion in 2008. Four of the seven foreign FRS regions reached the highest amount of exploration and development expenditures in the history of the FRS survey.

In 2008, FRS companies put more exploration and development expenditures into Africa than any other foreign region, as they have every year since 2002. Exploration and development expenditures in Africa increased 10 percent from 2007 to \$14 billion in 2008. Chevron has exploration and development projects in several countries in Africa. Production began at the Agbami field in Nigeria in July 2008 and by year-end, crude oil production was averaging 130,000 barrels per day.<sup>13</sup> Exxon Mobil has exploration activities and several developmental drilling projects underway in Nigeria and Angola, and it announced that production began from the Mondo and Saxi/Batuque fields in Angola in 2008.<sup>14</sup>

Exploration and development expenditures in the Other Eastern Hemisphere region increased 33 percent from 2007 to \$9 billion in 2008, surpassing Europe to become the second largest FRS foreign region. Chevron has exploration and development projects throughout Asia and is developing liquefied natural gas (LNG) plants in Australia to process natural gas. In 2008, Chevron was negotiating sales agreements for its Gorgon LNG facility and also announced plans for a multi-train LNG plant to process natural gas from its Wheatstone discovery.<sup>15</sup>

## Refining/Marketing Capital Expenditures

Capital expenditures for the FRS companies' domestic refining/marketing segment increased 24 percent from 2007 to \$26 billion in 2008 while foreign refining/marketing capital expenditures increased 11 percent (**Figure 7**).

<sup>12</sup> Chevron Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K filing, p. 11.

<sup>13</sup> Chevron Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K filing, p. 13.

<sup>14</sup> Exxon Mobil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K filing, pp. 17-18.

<sup>15</sup> Chevron Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K filing, pp. 15-16.

The companies reported that they used capital expenditures to expand capacity, increase the capability to process heavier crude oil, enhance the quality of products, improve operating efficiencies, and reduce emissions. From 2000 to 2008, average annual capital expenditures in the FRS domestic refining/marketing segment were twice that of 1990 to 1999, which reflects the improved return on investment in the past several years.

Marathon's Garyville refinery expansion is expected to be completed in the fourth quarter of 2009. This expansion will increase the refinery's crude oil throughput capacity by 180,000 barrels per day and will enable the refinery to produce an additional 7.5 million gallons of clean transportation fuels.<sup>16</sup> Marathon began construction in 2008 on a heavy oil upgrading and expansion of its Detroit refinery, which will enable the refinery to process additional heavy sour crude oils and will increase its crude oil refining capacity by about 15 percent.<sup>17</sup>

In 2008, BP made a final investment decision to significantly upgrade its Whiting refinery. The project will increase the refinery's Canadian heavy crude processing capability and modernize other equipment.<sup>18</sup> Over the past several years, BP has constructed new production units and upgraded existing conversion units at a number of facilities in order to produce higher-quality fuels.<sup>19</sup>

Motiva added coking capacity and made other upgrades in 2008 to increase the production of transportation fuels at its Port Arthur refinery. Motiva is also planning to double the crude oil throughput capacity of the refinery to 600,000 barrels per day by 2010.<sup>20</sup>

At Chevron's Richmond and El Segundo refineries, design, engineering, and construction work advanced during 2008 to further increase the refineries' ability to process high-sulfur crude oils and improve high-value product yields.<sup>21</sup>

Exxon Mobil added a cogeneration plant at its Antwerp refinery in Belgium. Cogeneration provides electricity as well as heat or steam for industrial processes, which lower operating costs and reduce emissions compared to producing steam and power separately.<sup>22</sup>

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<sup>16</sup> Marathon Oil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K filing, p. 59.

<sup>17</sup> Marathon Oil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K filing, p. 13.

<sup>18</sup> BP plc, 2008 U.S. Securities and Exchange Commission Form 20-F, p. 30.

<sup>19</sup> BP plc, 2008 U.S. Securities and Exchange Commission Form 20-F, p. 27.

<sup>20</sup> "Motiva Reaches Milestone in Refinery Expansion Project," Motiva Enterprises, 2008 Press Releases, available as of October 20, 2009 at [http://www.motivaenterprises.com/home/Framework?siteId=motiva-en&FC2=/motiva-en/html/iwgen/motiva\\_media\\_center/press\\_releases/2008/zzz\\_lhn.html&FC3=/motiva-en/html/iwgen/motiva\\_media\\_center/press\\_releases/2008/motiva\\_coker\\_units\\_110608.html](http://www.motivaenterprises.com/home/Framework?siteId=motiva-en&FC2=/motiva-en/html/iwgen/motiva_media_center/press_releases/2008/zzz_lhn.html&FC3=/motiva-en/html/iwgen/motiva_media_center/press_releases/2008/motiva_coker_units_110608.html).

<sup>21</sup> Chevron Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K filing, p. 24.

<sup>22</sup> "ExxonMobil Increases Global Cogeneration Capacity," Exxon Mobil Corporation, available as of October 21, 2009 at [http://www.businesswire.com/portal/site/exxonmobil/index.jsp?ndmViewId=news\\_view&ndmConfigId=1001106&newsId=20090323005147&newsLang=en](http://www.businesswire.com/portal/site/exxonmobil/index.jsp?ndmViewId=news_view&ndmConfigId=1001106&newsId=20090323005147&newsLang=en).





# Oil and Natural Gas Production

## Oil and Natural Gas Reserves

Hydrocarbon reserves held by the Financial Reporting System (FRS) companies fell slightly for oil (crude oil and natural gas liquids) and rose by even less for natural gas in 2008 (**Table 5**). Oil reserves in the United States fell, while overseas oil reserves, and natural gas reserves in the United States and overseas, grew by small amounts, with the largest proportional increase in foreign oil reserves. Accounting standards in place in 2008 required assessment of reserves based on year-end prices, which were much lower than prices at the end of 2007 and resulted in significant downward revisions of reserves in the United States and Canada.<sup>23</sup>

**Table 5. Oil and Natural Gas Reserves of FRS Companies, 2007 and 2008**

Region	Crude Oil and Natural Gas Liquids (million barrels)			Natural Gas (billion cubic feet)		
	2007	2008	Percent Change	2007	2008	Percent Change
United States						
Onshore	10,696	9,842	-8.0	101,424	103,310	1.9
Offshore	3,042	2,972	-2.3	8,343	7,603	-8.9
<b>Total United States</b>	<b>13,739</b>	<b>12,814</b>	<b>-6.7</b>	<b>109,768</b>	<b>110,913</b>	<b>1.0</b>
Foreign						
Canada	1,780	1,372	-22.9	10,593	9,868	-6.8
Europe	2,613	2,308	-11.7	11,725	9,956	-15.1
Former Soviet Union	1,369	1,906	39.2	2,124	2,647	24.6
Africa	5,041	5,070	0.6	10,577	10,601	0.2
Middle East	1,595	2,030	27.2	6,112	7,566	23.8
Other Eastern Hemisphere	1,718	1,911	11.2	25,047	26,038	4.0
Other Western Hemisphere	568	480	-15.6	15,348	15,065	-1.8
<b>Total Foreign</b>	<b>14,684</b>	<b>15,077</b>	<b>2.7</b>	<b>81,527</b>	<b>81,741</b>	<b>0.3</b>
<b>Total Worldwide</b>	<b>28,423</b>	<b>27,891</b>	<b>-1.9</b>	<b>191,295</b>	<b>192,654</b>	<b>0.7</b>

Note: Sums of elements may not add to totals due to independent rounding.

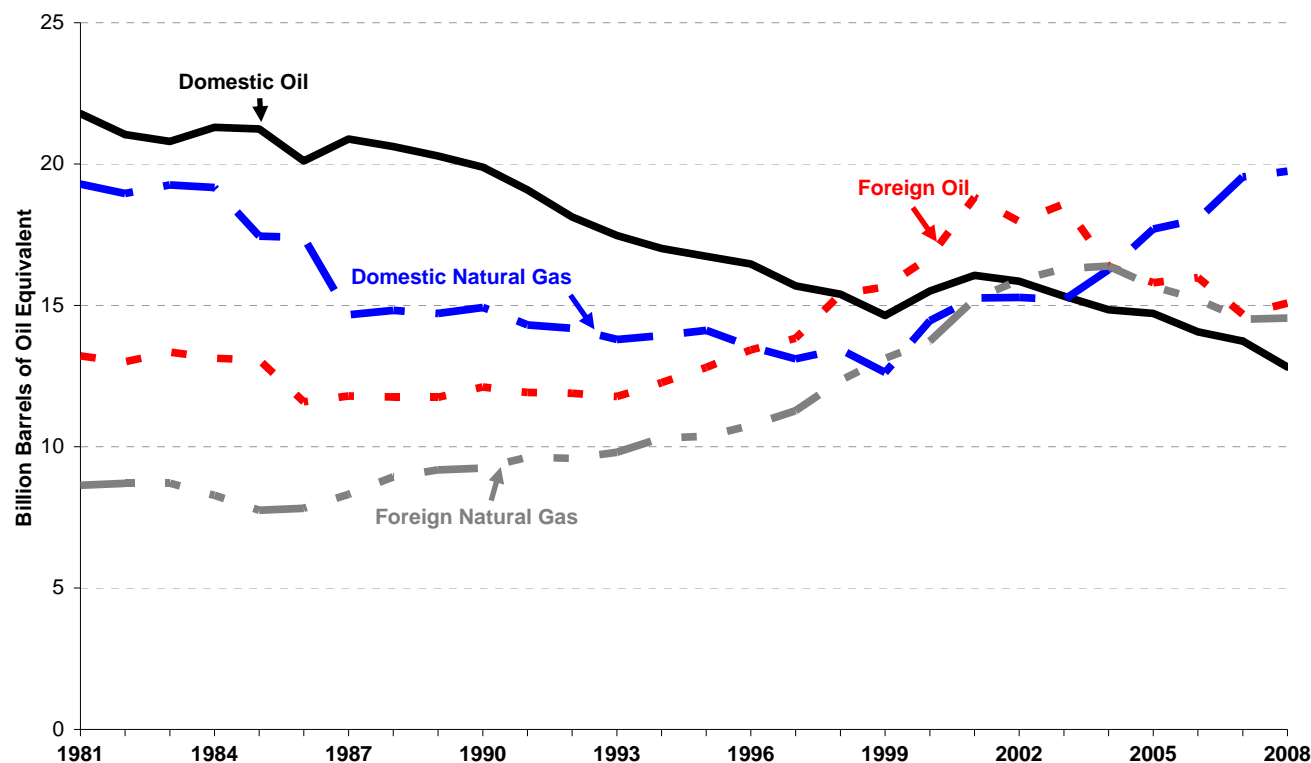
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Over the past several years only domestic natural gas reserves have been trending upward (**Figure 13**). Domestic natural gas reserves started to increase steadily in 2000, which roughly corresponds with the time when coal bed methane was becoming an important component of natural gas production in the United States. The recent surge and continued expansion of U.S. proved reserves in shale-gas reservoirs may provide a base for further increases in U.S. natural gas reserves. In contrast, domestic oil reserve levels have maintained a declining trend since before 1981.

The Former Soviet Union and the Middle East contributed the most to the growth in foreign oil reserves, while the Middle East and the Other Eastern Hemisphere (Asia) provided the largest increases in foreign natural gas

<sup>23</sup> For more information, see Energy Information Administration, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Proved Reserves, 2008*, [http://www.eia.doe.gov/oil\\_gas/natural\\_gas/data\\_publications/crude\\_oil\\_natural\\_gas\\_reserves/cr.html](http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/crude_oil_natural_gas_reserves/cr.html). Effective January 2010, reserves will be assessed based on an average of prices throughout the year.

Figure 13. Oil and Natural Gas Reserves of FRS Companies, 1981-2008



Note: Natural gas is converted to barrels of oil equivalent at 0.178 barrels per 1000 cubic feet.  
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

reserves. Foreign oil and natural gas reserve levels generally increased until 2001 and 2004, respectively, and then started to decline. In recent years there have been large decreases in reserves in some foreign regions, particularly in Europe, but also in Canada and the Other Western Hemisphere (**Figure 14**). These declines were not completely offset by increases in other formerly large and growing reserve areas—Africa and the Other Eastern Hemisphere, whose reserve levels have been relatively flat in the 2000s—or in the only region continuing to grow—the Middle East. In 2008, the FRS companies’ Middle East reserves grew to the fourth largest of the FRS foreign regions, surpassing both Canada and Other Western Hemisphere.<sup>24</sup>

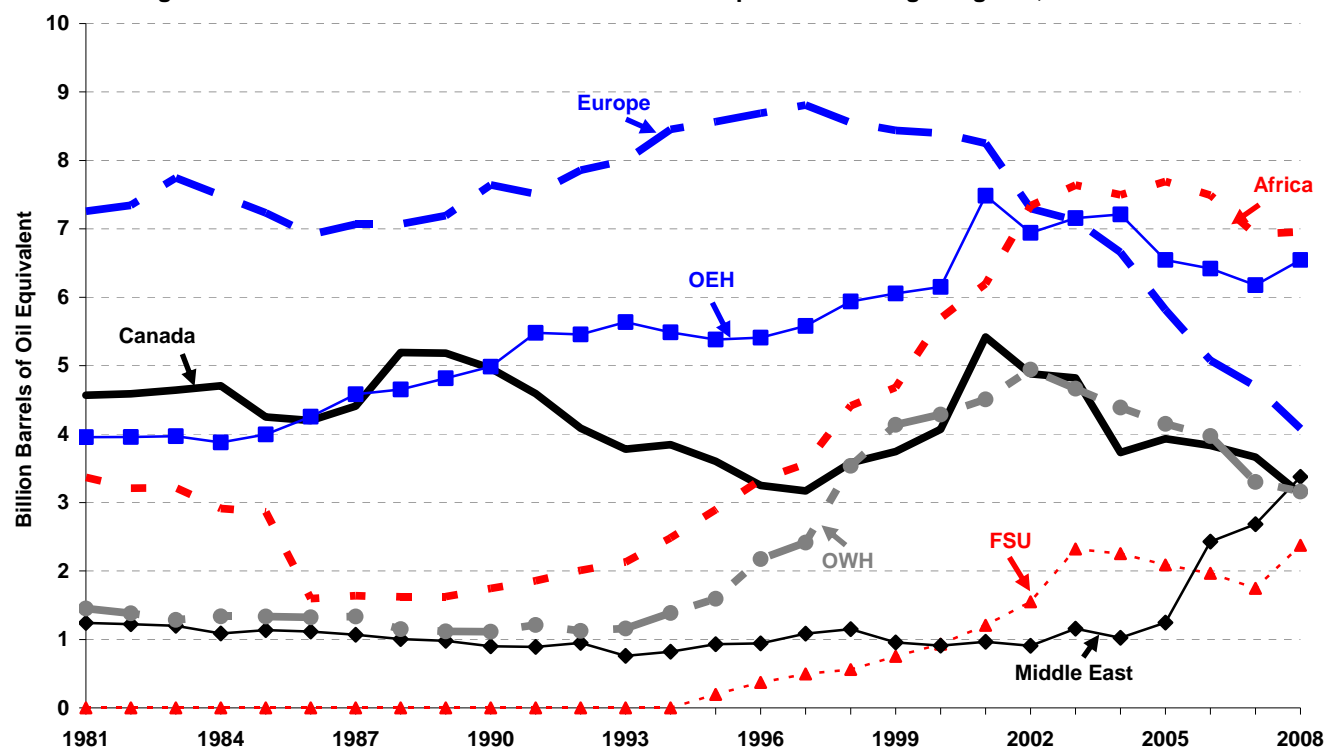
## Oil and Natural Gas Production

Worldwide production of oil by the FRS companies declined in 2008, while worldwide production of natural gas increased (**Table 6**). The decrease in oil production continues a decades-long trend, as the FRS companies have been shifting their focus to natural gas production. Domestic oil production declined proportionately less than foreign, which is atypical; usually domestic oil production declines faster than production overseas. Natural gas production grew faster domestically than overseas, in spite of a proportionately large decline in U.S. Offshore natural gas production.<sup>25</sup> Production of natural gas in the United States has grown faster than overseas production since 2006, in part, because of the surge in unconventional coal-bed methane and shale gas production in the United States.

<sup>24</sup> The majority of Middle East reserves are owned by national oil companies and are not included in FRS totals.

<sup>25</sup> This was due in large part to damage caused by hurricanes in September 2008. See, for example, Chevron Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K filing, p. 9.

Figure 14 Oil and Natural Gas Reserves of FRS Companies in Foreign Regions, 1981-2008



Note: FSU = Former Soviet Union; OEH = Other Eastern Hemisphere; OWH = Other Western Hemisphere. Data for FSU confidential before 1995. Natural gas is converted to barrels of oil equivalent at 0.178 barrels per 1000 cubic feet. Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Table 6. Oil and Natural Gas Production by FRS Companies, 2007 and 2008

Region	Crude Oil and Natural Gas Liquids (million barrels)			Natural Gas (billion cubic feet)		
	2007	2008	Percent Change	2007	2008	Percent Change
United States						
Onshore	709	715	0.9	7,097	7,677	8.2
Offshore	331	298	-10.0	1,260	1,062	-15.7
<b>Total United States</b>	<b>1,040</b>	<b>1,014</b>	<b>-2.6</b>	<b>8,356</b>	<b>8,739</b>	<b>4.6</b>
Foreign						
Canada	151	153	0.9	1,251	1,140	-8.9
Europe	406	383	-5.8	1,632	1,650	1.1
Former Soviet Union	122	92	-24.4	79	85	8.0
Africa	564	547	-2.9	473	562	18.6
Middle East	148	150	1.9	309	357	15.8
Other Eastern Hemisphere	243	227	-6.6	1,925	1,990	3.4
Other Western Hemisphere	66	66	0.0	1,274	1,296	1.8
<b>Total Foreign</b>	<b>1,699</b>	<b>1,618</b>	<b>-4.8</b>	<b>6,942</b>	<b>7,080</b>	<b>2.0</b>
<b>Total Worldwide</b>	<b>2,740</b>	<b>2,632</b>	<b>-3.9</b>	<b>15,298</b>	<b>15,818</b>	<b>3.4</b>

Note: Sums of elements may not add to totals due to independent rounding.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

## Oil and Natural Gas Reserve Additions

Reserve additions (excluding purchases and sales of reserves) are the quantities of proved reserves added each year as extensions and discoveries, improved recovery, or revisions to previous estimates.<sup>26</sup> Reserve additions are necessary for an upstream company to continue operating, since production reduces its inventory of reserves. By their nature they are often added in large amounts, such as when discoveries are made or when new technologies make additional reserves economic.

While the Former Soviet Union and Africa experienced large absolute gains in oil reserve additions in 2008, the U.S. Onshore and Canada suffered large declines, so that worldwide oil reserve additions increased just 2 percent in 2008 (**Table 7**). The Former Soviet Union and Africa rose primarily due to large increases in reserve revisions. For the U.S. Onshore, extensions and discoveries increased but were exceeded by a fall in revisions more than two and a half times the increase in extensions and discoveries. The story is similar for Canada, except that its overall decline in reserve additions was less steep.<sup>27</sup>

**Table 7. Oil and Natural Gas Reserve Additions\* of FRS Companies, 2007 and 2008**

Region	Crude Oil and Natural Gas Liquids (million barrels)			Natural Gas (billion cubic feet)		
	2007	2008	Percent Change	2007	2008	Percent Change
United States						
Onshore	834	-258	-131.0	14,988	8,001	-46.6
Offshore	255	226	-11.2	436	305	-30.0
<b>Total United States</b>	<b>1,089</b>	<b>-32</b>	<b>-102.9</b>	<b>15,424</b>	<b>8,307</b>	<b>-46.1</b>
Foreign						
Canada	181	-246	-236.1	682	478	-29.9
Europe	209	107	-48.6	820	-67	-108.2
Former Soviet Union	-66	692	1,154.0	-101	642	736.5
Africa	160	577	260.2	113	585	416.4
Middle East	354	585	65.2	470	1,811	284.9
Other Eastern Hemisphere	115	419	263.8	1,708	2,545	48.9
Other Western Hemisphere	82	68	-16.6	85	1,073	1,155.0
<b>Total Foreign</b>	<b>1,035</b>	<b>2,203</b>	<b>112.8</b>	<b>3,779</b>	<b>7,066</b>	<b>87.0</b>
<b>Total Worldwide</b>	<b>2,124</b>	<b>2,172</b>	<b>2.2</b>	<b>19,203</b>	<b>15,373</b>	<b>-19.9</b>

\* Excludes net purchases.

Notes: Additions to reserves can be negative due to downward revisions. For percent change calculation, when initial value is less than zero, the calculation has the opposite sign of standard percent change calculation. Sums of elements may not equal totals due to independent rounding.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Worldwide natural gas reserve additions fell as the large decline in additions for the U.S. Onshore by itself exceeded increases from five foreign regions in 2008 (**Table 7**). For the U.S. Onshore, additions by extensions and discoveries and by improved recovery increased but revisions, which went from 5,100 billion cubic feet (bcf) in 2007 to -4,900 bcf, dominated. Europe also contributed substantially to the fall in reserve additions, also largely

<sup>26</sup> For more detailed definitions, see the Brief Description of Financial Terms or the glossary at <http://www.eia.doe.gov/emeu/perfpro/glossary.html>.

<sup>27</sup> As indicated above, low year-end prices caused downward revisions in reserves in 2008.

because of revisions, although extension and discoveries also declined. The Middle East led the regions with reserve additions, almost all of which were also in the revisions category.

## Upstream Income

In 2008, the financial performance of the upstream operations (oil and natural gas exploration, development, and production) of FRS companies was decidedly mixed (**Table 8**). While worldwide revenues from sales of oil and natural gas increased 29 percent (in constant 2008 dollars)<sup>28</sup> on higher average prices for oil and natural gas, the companies also had a 56-percent increase in general operating expenses and a 57-percent increase in depreciation, depletion, and amortization, the two major cost categories for upstream expenses. A large contributor to these cost increases was the inclusion of \$46 billion (net, after taxes) of special items in these two cost categories, almost entirely the result of the write-downs of assets related to the fall in the prices of oil and, to a lesser extent, natural gas over the latter part of the year. In addition, their income tax expense increased 21 percent, with a particularly large increase in foreign income tax expense.<sup>29</sup> These developments combined to create a 19-percent decrease in upstream worldwide net income from the previous year. However, net income excluding special items increased 33 percent from 2007 to 2008.

The effect of the \$46 billion in special items is also evident in the change in direct lifting costs, which increased 14 percent worldwide in 2008, while operating expenses increased 55 percent, because virtually no special items are included in the production costs that make up the former, but they are included in the latter. Because return on investment is calculated using net income without excluding the special items, it fell almost 4 percentage points.

## Lifting Costs

Lifting costs (also called production costs) are the costs to operate and maintain wells and related equipment and facilities per barrel of oil equivalent (boe) of oil and natural gas produced by those facilities after the hydrocarbons have been found, acquired, and developed for production.<sup>30</sup> Direct lifting costs are total production spending minus production taxes (and also minus royalties in foreign regions) divided by oil and natural gas production in boe. Total lifting costs are the sum of direct lifting costs and production taxes.

Worldwide total lifting costs for the FRS companies increased \$2.40 per boe of production (24 percent) in 2008 to their highest level since 1983 (**Table 9**). Production taxes rose \$1.36 per boe while direct production costs rose \$1.04, increasing the percentage of total lifting costs that comes from taxes, a trend that began in 2002; until then that share had been declining. Production taxes typically rise and fall with changes in the prices of oil and natural gas. The FRS region with the largest increase in both total lifting costs and direct lifting costs was the Former Soviet Union, the smallest producing region for the FRS companies in 2008. However, the region with the highest absolute increase in production taxes per boe was the United States. Europe had a slight decline in direct production costs; in all other regions both direct lifting costs and production taxes increased. As in 2007, the U.S. Onshore had the highest total lifting costs of any region.

Direct lifting costs continued to climb in 2008, with domestic costs growing 14 percent and foreign costs growing 13 percent (**Figure 15**), reaching the highest levels since 1981 (the earliest year for which comparable data are available). All of the cost advantages gained between 1981 and the end of the century were wiped out by the increases that began in 2000 for foreign and 2001 for domestic production.

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<sup>28</sup> Unless otherwise indicated, all dollar values and percentage changes in this report are based in constant 2008 dollars, adjusted using the gross domestic product (GDP) deflator.

<sup>29</sup> See discussion of these issues in the preceding Financial Developments section.

<sup>30</sup> Because oil and gas are often produced together, it is not usually feasible to separate their costs, so lifting cost calculations are based on oil and natural gas production combined.

**Table 8. Income Components and Financial Ratios in Oil and Natural Gas Production for FRS Companies, 2007 and 2008  
(Billion 2008 Dollars)**

Income Components and Financial Ratios	Worldwide		United States		Foreign	
	2007	2008	2007	2008	2007	2008
Oil Sales	NA	NA	67.2	86.8	NA	NA
Natural Gas Sales	NA	NA	49.7	66.8	NA	NA
Total Oil and Natural Gas Sales	277.9	358.4	117.0	153.6	160.9	204.8
Other Revenues	3.0	6.4	3.2	5.1	-0.2	1.3
Total Revenues	280.9	364.8	120.2	158.7	160.7	206.1
Expenses						
General Operating Expenses	90.9	141.7	37.4	63.8	53.4	77.9
Depreciation, Depletion, and Amortization	48.3	75.9	25.3	42.4	23.0	33.6
General and Administrative Expenses	4.1	4.3	2.7	3.0	1.5	1.4
Total Operating Expenses	143.3	222.0	65.4	109.1	77.9	112.9
Operating Income	137.6	142.8	54.7	49.6	82.8	93.2
Other Income (Expense) <sup>a</sup>	21.8	14.8	8.0	6.4	13.8	8.4
Income Tax Expense	70.5	85.6	21.9	23.7	48.6	61.9
Net Income	88.9	72.1	40.9	32.3	48.0	39.8
Special Items	-0.4	45.8	-2.8	19.6	2.4	26.1
Net Income, Excluding Special Items <sup>b</sup>	88.5	117.8	38.1	51.9	50.4	65.9
Unit Values (Dollars per BOE of Production) <sup>c</sup>						
Direct Lifting Costs (Excluding Taxes)	7.50	8.54	8.53	9.76	6.61	7.44
Production Taxes	2.69	4.05	2.96	4.86	2.46	3.33
Percentages						
Return on Investment <sup>d</sup>	17.0	13.2	15.2	10.7	18.8	16.3
Effective Income Tax Rate <sup>e</sup>	44.4	54.6	34.9	42.3	50.6	61.5

<sup>a</sup>Earnings of unconsolidated affiliates, gain (loss) on disposition of assets, discontinued operations, extraordinary items, and cumulative effect of accounting change.

<sup>b</sup>Special items are items that are similar to, but do not necessarily qualify as, extraordinary or unusual items under U.S. generally accepted accounting principles.

<sup>c</sup>BOE = Barrels of oil equivalent. Natural gas is converted to equivalent barrels of oil at 0.178 barrels per thousand cubic feet.

<sup>d</sup>Net Income divided by net investment in place (Net investment in place = net property, plant, and equipment plus investments and advances to unconsolidated affiliates).

<sup>e</sup>Income tax expense divided by pretax income.

NA = Not available.

Note: Sum of elements may not equal total due to independent rounding.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

## Finding Costs

Finding costs are the average costs of adding proved reserves of oil and natural gas via exploration and development activities and the purchase of properties that might contain reserves. These costs are measured for oil and natural gas on a combined basis in dollars per boe. Ideally, finding costs would include all costs incurred (no matter when these costs were incurred or recognized on a company's books) in finding any particular proved reserves (not including the purchases of already discovered reserves). In practice, finding costs are actually measured as the ratio of exploration and development expenditures (including expenditures on unproved acreage but excluding expenditures on proved acreage) to proved reserve additions (excluding net purchases of proved

**Table 9. Lifting Costs for FRS Companies, 2007 and 2008  
(2008 Dollars Per Barrel of Oil Equivalent)**

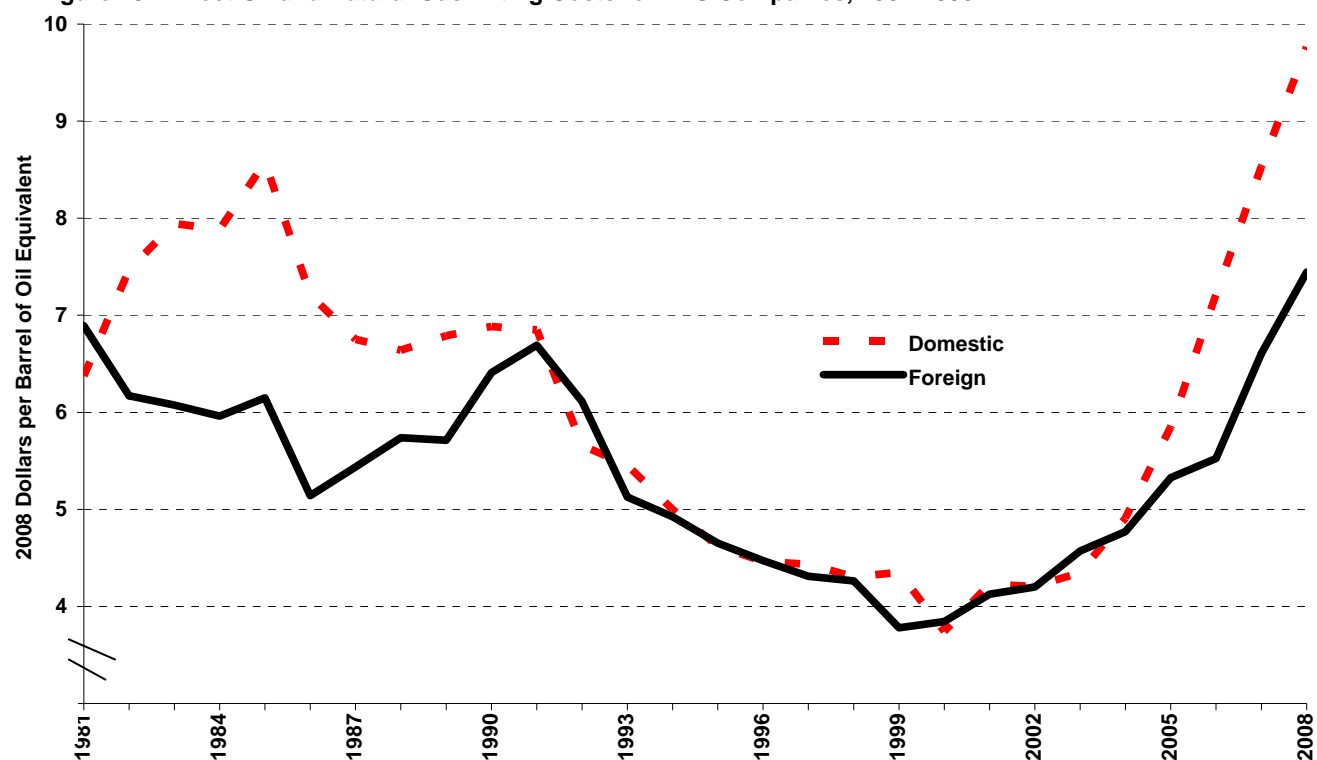
Region	Direct Lifting Costs			Production Taxes			Total		
	2007	2008	Percent Change	2007	2008	Percent Change	2007	2008	Percent Change
United States									
Onshore	NA	NA	NA	NA	NA	NA	12.16	15.10	24.24
Offshore	NA	NA	NA	NA	NA	NA	9.12	12.55	37.56
Total United States	8.53	9.76	14.42	2.96	4.86	64.19	11.49	14.62	27.23
Foreign									
Canada	10.24	11.79	15.19	0.39	0.42	8.00	10.63	12.22	14.92
Europe	8.66	8.61	-0.58	1.91	2.99	56.72	10.57	11.60	9.76
Former Soviet Union	4.06	6.78	67.03	0.50	2.16	329.61	4.56	8.95	96.01
Africa	5.78	7.21	24.55	3.76	4.08	8.53	9.55	11.29	18.24
Middle East	4.17	5.48	31.31	4.62	6.25	35.24	8.79	11.72	33.38
Other Eastern Hemisphere	5.51	6.15	11.70	2.89	4.23	46.23	8.40	10.38	23.59
Other Western Hemisphere	3.96	4.29	8.43	2.09	2.47	18.19	6.05	6.76	11.80
Total Foreign	6.61	7.44	12.69	2.46	3.33	35.20	9.07	10.77	18.80
Worldwide Total	7.50	8.54	13.88	2.69	4.05	50.45	10.19	12.59	23.54

NA = Data not available.

Notes: Natural gas is converted to equivalent barrels of oil at 0.178 barrels per thousand cubic feet. Sum of elements may not add to total due to independent rounding.

Source: Energy Information Administration, Form EIA-28, (Financial Reporting System).

**Figure 15. Direct Oil and Natural Gas Lifting Costs for FRS Companies, 1981-2008**



Notes: Direct lifting costs are the costs of extracting oil and gas, excluding production taxes.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

reserves) over a specified period of time.<sup>31</sup> Finding costs are generally calculated in *Performance Profiles* as a weighted average over a period of 3 years.

Average worldwide finding costs for the FRS companies increased \$4.86 per boe of reserves added in the 2006-2008 period compared to the 2005-2007 period (**Table 10**). Regional finding costs generally show an increasing divergence between North America/Europe and the rest of the world. Finding costs increased in each of the regions of North America/Europe, but decreased in three of the four regions in the rest-of-the-world.<sup>32</sup> Furthermore, three of the four North America/Europe regions are among the highest-cost regions while three of the five rest-of-the-world regions are the lowest-cost regions. The U.S. Offshore maintained its position as the most expensive region, while the Middle East remained the least expensive. The largest change in finding costs occurred for Europe, where costs increased more than \$29 per boe.

Finding costs for the FRS companies in both the U.S. Onshore and U.S. Offshore increased in 2006-2008 (**Figure 16**). On average finding costs in foreign regions declined, and fell below those of the U.S. Onshore. Since early in this century, finding costs, led by the U.S. Offshore, generally have been increasing. As with lifting costs, the recent levels of finding costs are in part a result of the high prices of oil and natural gas that existed through the first half of 2008. Producers are willing to spend more to find oil and natural gas when their prices are higher. The substantial price declines in the second half of 2008 reduced reserve additions in 2008, which also tended to push up finding costs.

The U.S. Offshore remains the highest finding cost region, far above the U.S. Onshore and the average of foreign production (**Figure 16**). However, finding costs in Europe neared those of the U.S. Offshore in 2006-2008, while finding costs in Africa and Other Western Hemisphere, two other higher cost regions, have been centered near \$35 per boe in recent three-year periods (**Figure 17**). In addition to higher finding costs, the volatility in these regions has also increased. Nonetheless, finding costs for the Middle East and the Former Soviet Union remain below their highs of the 1980s for the former and 1990s for the latter.<sup>33</sup>

## Upstream Costs

Total upstream costs are the sum of finding costs and lifting costs. Lifting costs are averaged over 3 years to make them comparable with finding costs. Upstream costs in the aggregate rose \$6.56 per boe for the FRS companies for 2006-2008 (**Table 11**). Upstream costs were highest in the U.S. Offshore and Europe and lowest in the Former Soviet Union, the Middle East, and the Other Eastern Hemisphere.

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<sup>31</sup> One inherent limitation of measuring finding costs this way is that the expenditures and the reserve additions recognized in a particular interval do not usually correspond exactly with each other. Expenditures are usually recognized in the period in which the payment actually occurred. Proved reserves are usually recognized when there is reasonable certainty that they can be produced economically. There is no reason that these must occur in the same time period (oil and gas wells are often operated over a long time period), so that some expenditures may not be recognized in the same time period in which their corresponding reserves are recognized. One way to moderate this limitation is to increase the length of the time period over which finding costs are measured, allowing reserve additions and exploration and development expenditures to match more closely. However, the longer the time period over which finding costs are measured, the more out of date they become, because they include increasingly older expenditures and reserves, and costs and technology are constantly changing. The only way to solve the correspondence problem would be to calculate an average finding cost for all oil and gas produced by a well after it is permanently shut in. But then many costs included would be far out of date.

<sup>32</sup> The Former Soviet Union had total reserve additions of less than zero in 2005-2007, rendering its change in finding costs undefined.

<sup>33</sup> Former Soviet Union finding cost data are first available in 1993-1995.



**Table 10. Finding Costs by Region for FRS Companies, 2005-2007 and 2006-2008**  
(2008 Dollars per Barrel of Oil Equivalent)

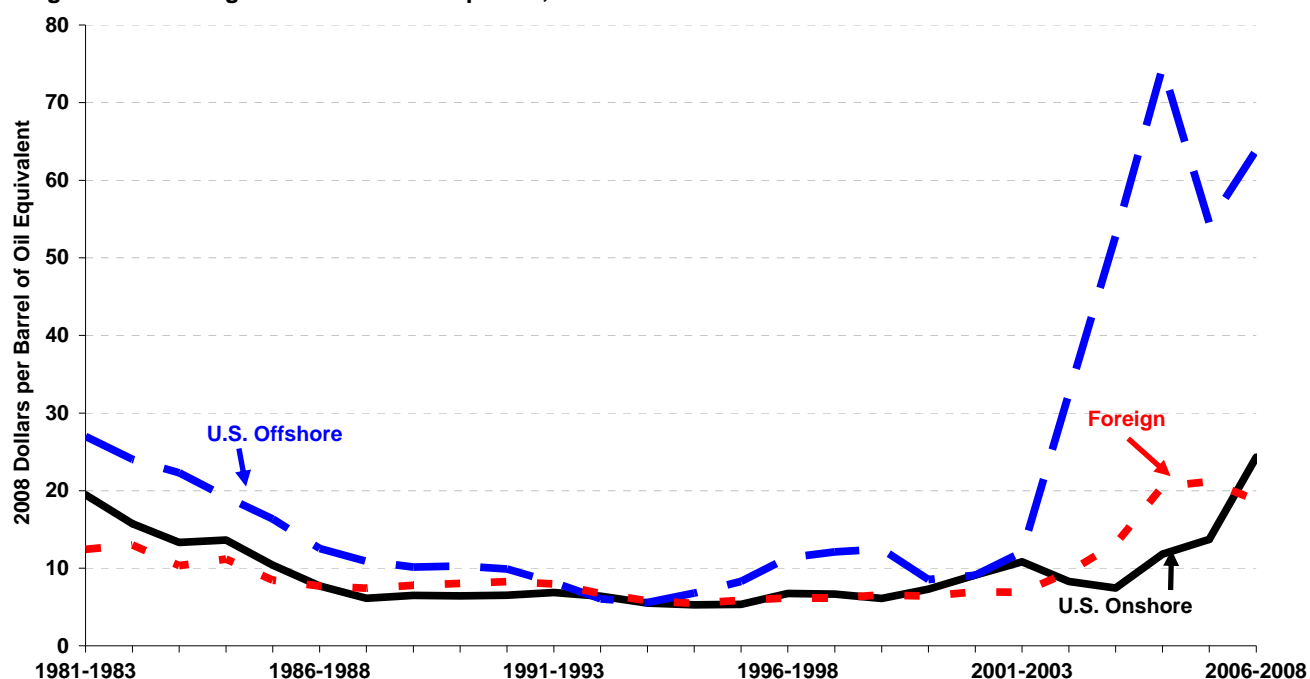
Region	2005-2007	2006-2008	Percent Change
<b>United States</b>			
Onshore	13.72	24.31	77.2
Offshore	54.45	63.89	17.3
Total United States	17.52	29.11	66.2
<b>Foreign</b>			
Canada	12.48	27.80	122.7
Europe	32.29	61.37	90.1
Former Soviet Union	NM	10.45	NM
Africa	39.11	32.49	-16.9
Middle East	4.88	5.12	5.0
Other Eastern Hemisphere	21.03	12.45	-40.8
Other Western Hemisphere	30.98	27.36	-11.7
Total Foreign	21.17	18.75	-11.4
<b>Worldwide</b>	18.98	23.84	25.6

NM = Not meaningful.

Notes: The above figures are 3-year weighted averages of exploration and development expenditures, excluding expenditures for proven acreage, divided by reserve additions, excluding net purchases of reserves. Natural gas is converted to equivalent barrels of oil at 0.178 barrels per thousand cubic feet. Sum of elements may not add to total due to independent rounding.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

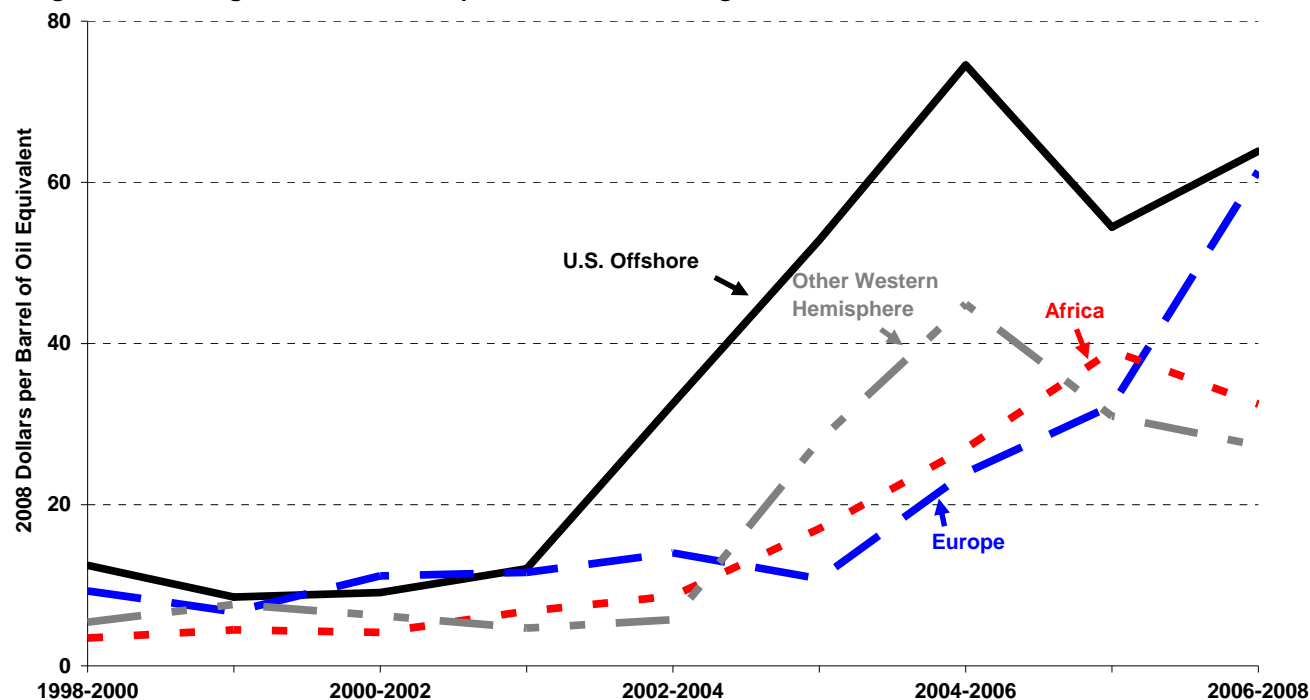
**Figure 16. Finding Costs for FRS Companies, 1981-1983 to 2006-2008**



Notes: Costs are the quotient of costs and reserve additions for each 3-year period. BOE = Barrels of oil equivalent.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Figure 17. Finding Costs of FRS Companies for Selected Regions, 1998-2000 to 2006-2008



Notes: Costs are the quotient of costs and reserve additions for each 3-year period. BOE = Barrels of oil equivalent.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table 11. Upstream Costs by Region for FRS Companies, 2005-2007 and 2006-2008**  
(2008 Dollars per Barrel of Oil Equivalent)

Region	2005-2007	2006-2008	Percent Change
<b>United States</b>			
Onshore	24.00	36.90	53.7
Offshore	62.29	73.47	17.9
Total United States	27.20	41.03	50.8
<b>Foreign</b>			
Canada	21.60	38.36	77.6
Europe	41.20	71.61	73.8
Former Soviet Union	NM	16.54	NM
Africa	47.01	41.83	-11.0
Middle East	15.18	16.93	11.5
Other Eastern Hemisphere	28.14	20.97	-25.5
Other Western Hemisphere	36.96	33.58	-9.1
Total Foreign	29.23	28.03	-4.1
<b>Worldwide</b>	27.78	34.34	23.6

NM = Not meaningful.

Notes: Upstream costs are finding costs plus lifting costs. Natural gas is converted to equivalent barrels of oil at 0.178 barrels per thousand cubic feet. Sum of elements may not add to total due to independent rounding.

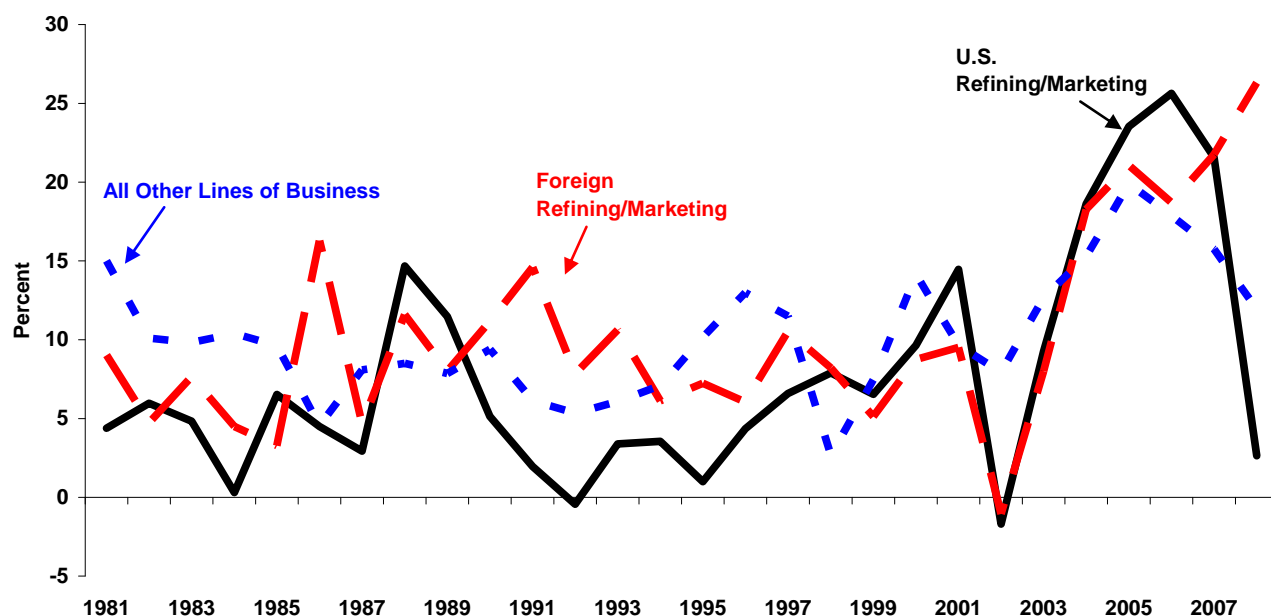
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

# Refining and Marketing

## U.S. Refining/Marketing

The average profitability (contribution to net income divided by net investment in place or return on investment (ROI)) of U.S. refining/marketing operations of the respondents to the Financial Reporting System (FRS) survey was 3 percent in 2008 after averaging 22 percent over the years 2004 through 2007, which were the 4 highest years in the history of the FRS. Further, in only 5 years in the 32-year history of the FRS has the annual ROI for FRS U.S. refining/marketing operations been lower than for 2008 (**Figure 18**). Cost-cutting efforts were a major contributing factor to the profitability of the FRS refining/marketing operations in the 1990s (see **Figure 6** in the “Financial Developments” section), and have continued to help refiners constrain costs. From 2003-2007, however, profitability was well above the average of the 1990s (i.e., 4 percent)<sup>34</sup> as prices and revenue increased at a faster rate than costs. This changed in 2008 as a 24-percent increase in per-barrel operating costs (**Table 12**) was a major factor in driving down U.S. refining/marketing profitability.

**Figure 18. Return on Investment in U.S. and Foreign Refining/Marketing,<sup>a</sup> and All Other Lines of Business for FRS Companies, 1981-2008**



<sup>a</sup>: International Marine has been combined with Foreign Refining/Marketing for the years 2003-2008 to avoid disclosure of company-level data.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

An examination of the net refined product margin (net margin), which has been found to strongly correlate with profitability,<sup>35</sup> can illuminate the reasons underlying changes in the profitability of U.S. refining/marketing

<sup>34</sup> The weighted-average profitability of the 1990-1999 period was 4.3 percent and the weighted-average profitability of the 1991-2000 period was 5.0 percent.

<sup>35</sup> The net margin highly correlates with return on investment. The latest estimation of the relationship between refining margins and profitability is that the correlation coefficient is 0.93. See “Refining Margins as Predictors of Profitability” in Chapter 4 of *Performance Profiles of Major Energy Producers 2003*.

**Table 12. Sales, Prices, Costs, and Margins in U.S. Refining/Marketing for FRS Companies, 2007-2008**

	2007	2008	Percent Change 2007-2008
Refined Product Sales (Million Barrels per Day) <sup>a</sup>	20.1	20.4	1.6
	(2008 dollars per barrel)		
Gasoline Average Price	94.60	109.05	15.3
Distillate Average Price	93.26	125.24	34.3
Other Products Average Price	63.53	80.14	26.1
All Refined Products Average Price	88.63	109.20	23.2
Less: Raw Materials Costs and Product Purchases	76.12	98.14	28.9
Equals: Gross Refining Margin	12.51	11.06	-11.6
Less: Operating Costs	7.74	9.58	23.7
Equals: Net Refining Margin <sup>b</sup>	4.77	1.48	-69.0
Reseller/wholesaler spread (dealer price - wholesale price)	3.66	4.94	35.0
Retailer spread (company-operated price - dealer price)	5.82	8.66	48.9

<sup>a</sup>Refined product sales include sales for resale to other FRS companies and sales of imported products.

<sup>b</sup>See Detailed Statistical Tables, Table T18 for the components to calculate the refined product margin.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

operations. The net margin is the gross margin<sup>36</sup> minus operating costs per barrel of refined product sold. The \$1.48-per-barrel net margin of 2008 was one of the lowest (in terms of 2008 dollars)<sup>37</sup> in the 32-year history of the FRS (see **Figure 6**, above), falling in the bottom third of net margins ranked from highest to lowest.

The average gross refining margin reported by the FRS companies in 2008 fell almost 12 percent compared with 2007 (**Table 12**). The average price received for petroleum products in 2008 increased \$20.57 relative to the 2007 value, while raw materials and purchased product costs rose \$22.02 per barrel to \$98.14. These changes resulted in a \$1.45-per-barrel decrease in the gross refining margin to \$11.06. However, the gross margin of 2008 was still among the highest in the history of the FRS, ranking in the top third.

## Revenues and Costs

Crude oil prices increased substantially in the first half of 2008, which resulted in a much higher annual price for 2008 than for 2007.<sup>38</sup> U.S. crude oil stock levels were generally lower in 2008 than in 2007, but remained close to the 2002-2006 average until the end of the year (**Figure 19**). Thus, relatively lower stock levels put upward pressure on crude oil prices, which contributed to the 29-percent increase in raw material and purchased product costs for FRS companies (**Table 12**).<sup>39</sup> Additionally, problems with the U.S. refining system<sup>40</sup> put upward pressure on product prices and may have contributed to lower product and motor gasoline stock levels.

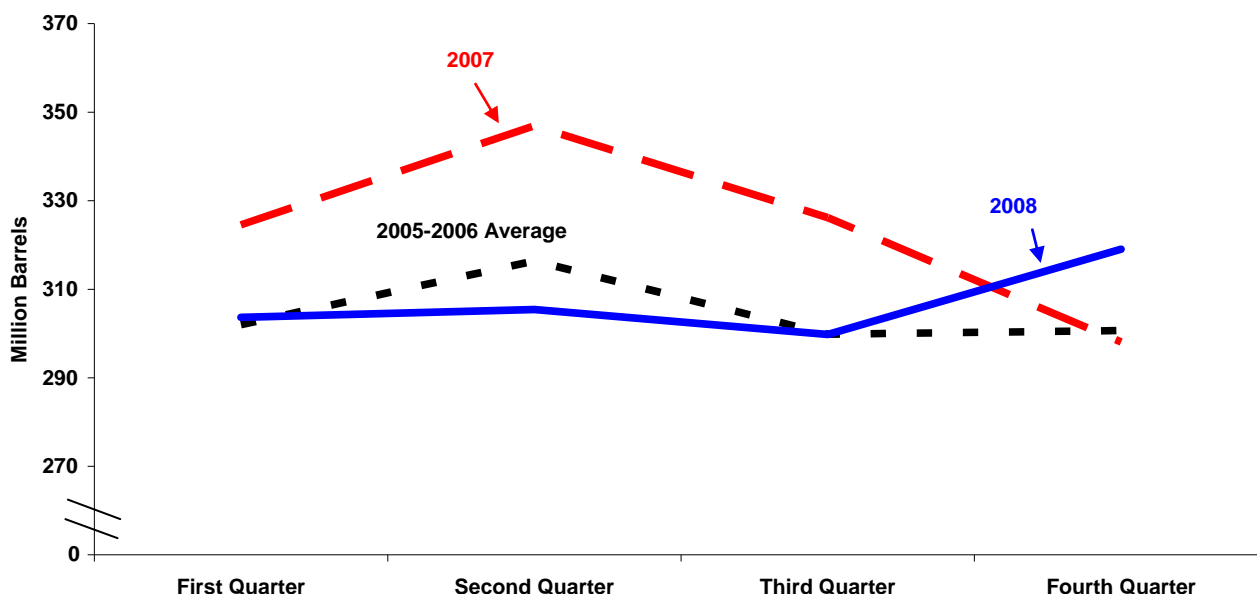
<sup>36</sup> For more detailed definitions, see the Brief Description of Financial Terms.

<sup>37</sup> Unless otherwise indicated, all dollar values and percentage changes in this report are in constant 2008 dollars, adjusted using the Gross Domestic Product implicit price deflator.

<sup>38</sup> Energy Information Administration, Short-Term Outlook (December 9, 2008 and October 6, 2009), Table 2.

<sup>39</sup> Crude oil stock levels are only one of many factors affecting the price of crude oil. See the *Short-Term Energy Outlook* for a broader discussion (<http://www.eia.doe.gov/emeu/steo/pub/contents.html> as of November 25, 2009).

Figure 19. Quarterly Average U.S. Crude Oil Stocks, 2002-2006 Average, 2007, and 2008



Source: Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109 (Various issues, Washington, DC), Table 51.

Higher annual crude oil prices in 2008 (compared to 2007) put upward pressure on petroleum product prices. Similarly, industry-wide stocks of petroleum products were lower in most of 2008 than in 2007 (**Figure 20**), most notably motor gasoline stocks, which were much lower than both 2007 and the average for the 2002-2006 period (**Figure 21**). Both developments put upward pressure on product prices in general and motor gasoline in prices in particular.

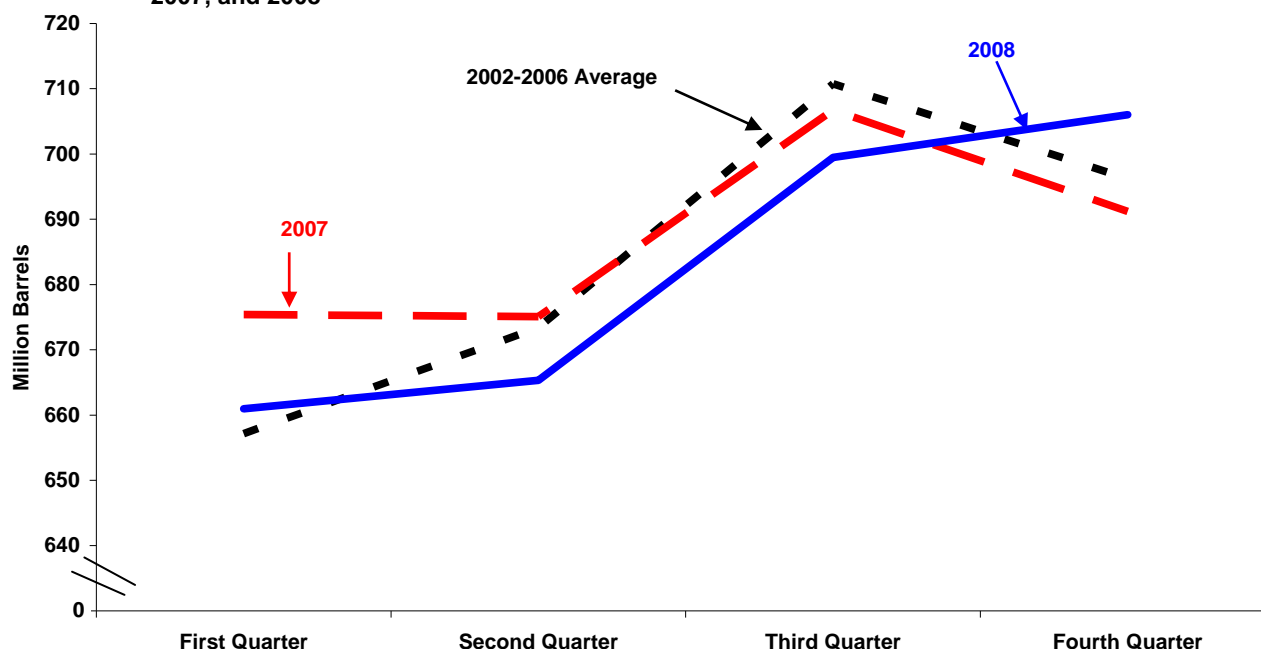
FRS petroleum product sales increased almost 2 percent in 2008 relative to 2007 (**Table 12**). Product sales are composed chiefly of motor gasoline and distillate. Gasoline sales decreased negligibly (less than 1 percent) while distillate sales increased 6 percent. Sales of all other petroleum products declined 1 percent in 2007 relative to 2006 (**Table 13**). Higher sales and higher petroleum product prices resulted in a 25-percent increase in domestic petroleum product sales revenues (**Table 14**). Meanwhile, operating costs increased by almost \$27 billion more than did sales revenues. This combination of increased revenues and increased costs resulted in a 76-percent decline in operating income in 2008 relative to 2007 and an 85-percent decrease in net income.

Overall domestic operating expenses increased 30 percent between 2007 and 2008 (**Table 14**). Those operating expenses most closely associated with refining and marketing operations increased by 24 percent on a per-barrel

<sup>40</sup> In particular, Hurricane Gustav caused 12 refineries (totaling 12 percent of U.S. capacity) to close and impaired the operations of 10 other refineries (see “Gustav Idles 12% of US Refining Capacity,” *Oil and Gas Journal* (September 1, 2008)). Hurricane Ike caused multiple-day closings of 14 of the Gulf Coast refineries (see Hayes, Kristen, “More Refineries Press Restart Button,” *Houston Chronicle* (September 23, 2008)), which amounted to 21 percent of U.S. refining capacity (see “Hurricane Ike Idles 21% of US Refining Capacity,” *Oil and Gas Journal* (September 12, 2008)). Additionally, two of BP’s largest refineries were partially off-line for part of the year as the Whiting, Indiana refinery was fully restored March 21 and the Texas City, Texas refinery became fully operational in the fourth quarter of 2008 (see BP, plc, 2008 U.S. Securities and Exchange Commission Form 20-F, p. 30).

basis between 2007 and 2008 (**Table 12**), led by increases in refining energy costs and other operating costs (**Table 13**).

**Figure 20. Quarterly Average U.S. Commercial Petroleum Product Stocks, 2002-2006 Average, 2007, and 2008**



Source: Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109 (Various issues, Washington, DC), Table 51.

Energy costs increased by \$0.65 per barrel, to the highest level since 1985 and one of the highest levels ever reported in the history of the FRS. Average wellhead natural gas prices were \$1.56 per thousand cubic feet higher than in 2007, accounting for some of the increase. Additionally, the companies reported increased costs as a result of contractual obligations<sup>41</sup> and because their operations increased as refineries were brought online after extended periods of inaction.<sup>42</sup> FRS companies continue their efforts to contain energy costs,<sup>43</sup> for example through existing and additional cogeneration projects<sup>44</sup> and modernization of refinery control systems.<sup>45</sup>

Other operating costs related to refining increased from \$4.06 per barrel in 2007 to \$5.21 per barrel in 2008 (**Table 13**). Adjustments to comply with the Clean Air Act Amendments of 1990, most recently

<sup>41</sup> Tesoro Corporation, U.S. Securities and Exchange Commission Form 10-K, p. 30

<sup>42</sup> The per-barrel energy costs are computed by dividing U.S. refining energy costs by total product sales, and, thus, may not fully reflect changes in per-unit energy costs if there are unusual changes in the net sales/refinery output of the respondent companies.

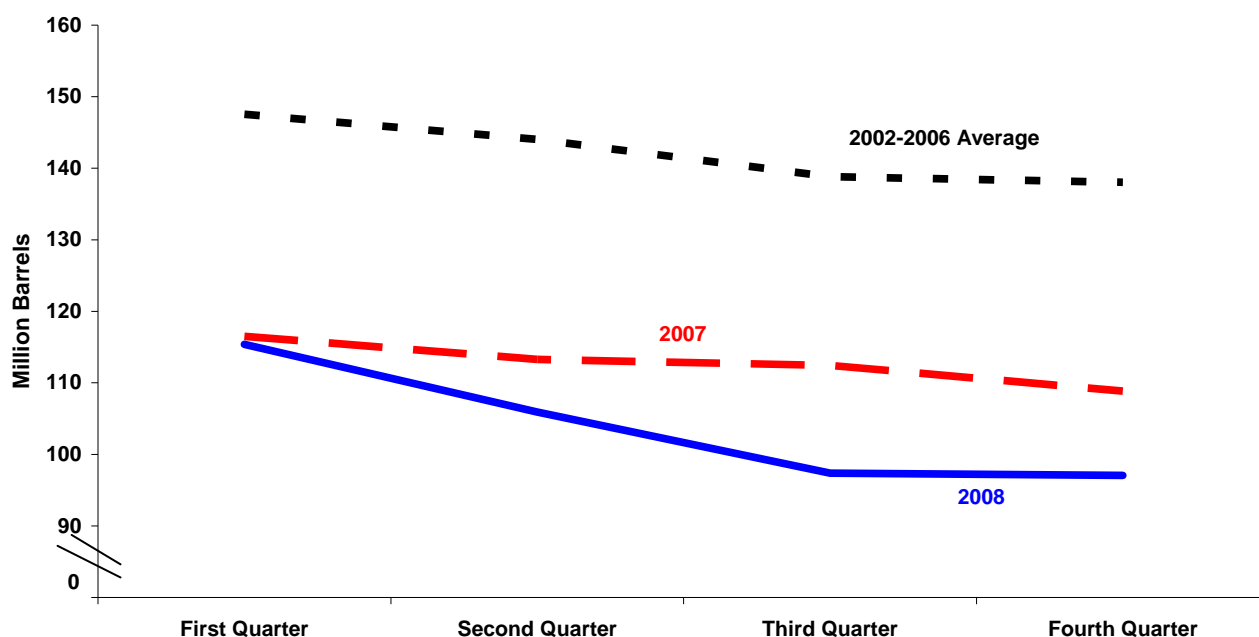
<sup>43</sup> ConocoPhillips, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 18.

<sup>44</sup> BP acquired a cogeneration facility from NiSource for a total of \$403 million (see BP plc, "BP Buys Whiting Clean Energy Power Plant in Indiana," press release (July 1, 2008) and 2008 U.S. Securities and Exchange Commission Form 20-F, p. 115). Further Exxon Mobil noted, "With new facilities under construction, we expect to increase our cogeneration capacity to more than 5 gigawatts by 2011 [Capacity is presently approximately 4.5 gigawatts.] (see Exxon Mobil Corporation, "Cogeneration," available at [http://www.exxonmobil.com/corporate/energy\\_climate\\_ops\\_cogeneration.aspx](http://www.exxonmobil.com/corporate/energy_climate_ops_cogeneration.aspx) (as of October 21, 2009))."

<sup>45</sup> Tesoro completed a controls modernization project at its Hawaii refinery at the end of 2008 (see Tesoro Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 30.)

low-sulfur diesel mandates, have increased operating costs.<sup>46</sup> Asset impairments also pushed up operating costs.<sup>47</sup>

**Figure 21. Quarterly Average U.S. Motor Gasoline Stocks, 2002-2006 Average, 2007, and 2008**



Source: Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109 (Various issues, Washington, DC), Table 51.

## Operational Changes

The FRS companies have been refocusing their marketing operations for the last several years. They have done so by making selective investment in some outlets<sup>48</sup> and divestiture of others.<sup>49</sup> However, three of the largest

<sup>46</sup> Although EIA has no estimate of the significance of the environmental spending in 2008 for other operating costs, some companies indicated that their operating expenses attributable to environmental cost remained considerable, or were increasing. For example, ConocoPhillips reported environmental operating costs of \$1,025 million in 2007 (see ConocoPhillips, 2007 U.S. Securities and Exchange Commission Form 10-K, p. 84) and of \$957 million in 2008 with estimates for the next two years at \$1 billion each year (see ConocoPhillips, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 65). Alternatively, Exxon Mobil indicated that its environmental operating costs rose from \$2,272 million in 2007 to \$2,730 million in 2008 (see Exxon Mobil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 50). Also see an EIA study that examined the effects of environmental compliance on operating costs, which is available on EIA's web site ([http://www.eia.doe.gov/emeu/perfpro/ref\\_pi2/index.html](http://www.eia.doe.gov/emeu/perfpro/ref_pi2/index.html)).

<sup>47</sup> For example, ConocoPhillips made unspecified write-downs of its refining/marketing assets (see ConocoPhillips, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 48), Tesoro recorded a \$22 million impairment when it closed 42 motor gasoline outlets and offered 20 more for sale (see Tesoro Corporation, U.S. Securities and Exchange Commission Form 10-K, pp. 38-39), and Valero recorded a \$4.1 billion write-down (see Valero Energy Corporation, U.S. Securities and Exchange Commission Form 10-K, p. 32).

<sup>48</sup> For example, Valero acquired 70 convenience stores and fueling kiosks from Albertson's LLC for \$87 million, including \$4 million for inventory. The sites are located in Texas, Colorado, Arizona, and Louisiana and "... enhance ... [Valero's] existing retail network and supply chain (see Valero Energy Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 78). In a different vein, Shell has introduced hydrogen fueling capability in some of its California motor gasoline outlets (see Motiva Enterprises, "Shell Opens Los Angeles' First Combined Hydrogen and Gasoline Station," press

companies recently announced that they would be exiting motor gasoline retailing rather than merely “refocusing” their operations as had been the case.<sup>50</sup> The FRS companies’ reduction in their direct-supplied outlets during 2008 demonstrated their lack of confidence that the recent high returns to U.S. refining/marketing operations would persist.

**Table 13. U.S. Refined Product Margins and Costs per Barrel Sold and Product Sales Volume for FRS Companies, 2007-2008**

	2007	2008	Percent Change 2007 - 2008
	(2008 dollars per barrel)		
Gross Margin	12.51	11.06	-11.6
- Marketing Costs	1.71	1.74	2.0
- Energy Costs	1.97	2.62	33.0
- Other Operating Costs	4.06	5.21	28.4
= Net Margin	4.77	1.48	-69.0
Product Sales Volume <sup>a</sup>	(Thousand Barrels per Day)		
Motor Gasoline	10,325	10,300	-0.2
Distillate	6,149	6,526	6.1
Other Products	3,587	3,551	-1.0
Total	20,061	20,376	1.6

<sup>a</sup>Refined product sales include sales for resale to other FRS companies and sales of imported products.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Marketing costs rose slightly in 2008 (**Table 13**) as FRS direct-supplied<sup>51</sup> motor gasoline outlets were reduced 7 percent in 2008 (**Table 15**), continuing a long-time trend (**Figure 22**). Companies indicated that marketing costs

release (June 26, 2008)) while Motiva added E10 supply capability in its south Florida market (see Motiva Enterprises LLC, “Motiva Becomes First Major to Supply E10 to South Florida,” press release (June 17, 2008)).

<sup>49</sup> Tesoro closed 42 outlets and offered another 20 for sale (see Tesoro Corporation, U.S. Securities and Exchange Commission Form 10-K, pp. 38-39). Motiva sold 86 Shell-branded outlets in the Dallas/Fort Worth area (see Motiva Enterprises, “Motiva Transitions Dallas-Fort Worth Shell Branded Stations to Quik Way Retail Associates,” press release (February 25, 2008)). Sunoco noted that it had divested 181 outlets during the 2006-2008 period and identified approximately 150 additional outlets in early 2009 to be divested (see Sunoco, Inc., 2008 U.S. Securities and Exchange Commission Form 10-K, p. 32).

<sup>50</sup> ConocoPhillips Company, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 19; BP plc, “BP to Sell Most Company-Owned, Company-Operated Convenience Stores to Franchisees,” press release (November 15, 2007); and “Exxon Plans to Sell Its Gas Stations,” *The New York Times* (June 13, 2008). The article notes that Exxon Mobil already did not own about 75 percent of its branded outlets. ConocoPhillips has nearly completed its exit as of January 2009 with only another 210 outlets to divest (see ConocoPhillips, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 19). BP, too, has begun its exit following its announcement by BP selling 32 convenience stores in the Indianapolis, Indiana area (see *Indianapolis Business Journal*, “Anderson Firm to Buy 32 Indy-Area BP Stations,” (September 24, 2008)) and 57 outlets in the Chicago area (see “Atlas Oil to Acquire and Supply 57 BP Locations in Chicago Suburbs,” *National Petroleum News* (October 30, 2008)).

<sup>51</sup> An FRS “direct-supplied” motor gasoline outlet is one that has a supply contract directly with an FRS company. Many outlets that display an FRS motor gasoline brand are not directly supplied by the FRS company whose brand the outlet displays.



increased because of competitive pressures; that is, that companies increased their spending to differentiate their petroleum products from those of their competitors.

**Table 14. U.S. and Foreign Refining/Marketing<sup>a</sup> Financial Items for FRS Companies, 2007-2008**  
(2008 Million Dollars)

	2007	2008	Percent Change 2007-2008
<b>Domestic Refining/Marketing Operations</b>			
Refined Product Sales Revenue	648,992	812,149	25.1
Other Revenue <sup>b</sup>	14,554	21,288	46.3
Operating Expense <sup>b, c</sup>	636,832	826,950	29.9
Operating Income <sup>c</sup>	26,714	6,487	-75.7
Net Income, excluding special Items	21,607	8,855	-59.0
Special Items	1,255	-5,516	-539.4
Net Income	22,862	3,339	-85.4
<b>Foreign Refining/Marketing Operations<sup>a</sup></b>			
Refined Product Sales Revenue	304,097	361,538	18.9
Other Revenue <sup>b</sup>	13,422	15,386	14.6
Operating Expense <sup>b, c</sup>	306,560	361,964	18.1
Operating Income <sup>c</sup>	10,959	14,960	36.5
Net Income, excluding special Items	8,624	11,329	31.4
Special Items	773	-229	-129.6
Net Income	9,398	11,100	18.1

<sup>a</sup>In order to prevent disclosure of company-level data the International Marine business segment has been combined with Foreign Refining/Marketing for this presentation. Relative to Foreign Refining/Marketing, International Marine is about one-tenth the size and has little material effect on the overall results of Foreign Refining/Marketing.

<sup>b</sup>Raw materials revenues are netted against total operating expense.

<sup>c</sup>Excludes Special Items.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

The number of company-operated outlets fell 9 percent while dealer outlets fell 6 percent during 2008 (**Table 15**) against an industry backdrop of a small increase in U.S. motor gasoline outlets.<sup>52</sup> The overall effect was a reduction of more than 1,500 direct-supplied FRS branded outlets during 2008 and a small decline in the FRS share of total U.S. outlets from 24 percent at year-end 2007 to 22 percent at year-end 2008. Marginal outlets normally would be the first divested, which would tend to increase average productivity of the remaining outlets,<sup>53</sup> measured by average monthly motor gasoline sales volume. As expected, dealer productivity increased 7 percent between 2007 and 2008. However, productivity of company-operated outlets fell 12 percent, which may indicate the FRS companies' strategy to exit this part of their marketing operations, regardless of its effect on per-outlet productivity.<sup>54</sup>

<sup>52</sup> According to the *National Petroleum News*, there were 161,068 outlets in 2007 and 162,350 in 2008 (M2Media360, *NPN Magazine, 2009 market facts Overview* (July/August 2009), p. 22.

<sup>53</sup> However, as some FRS companies have noted in the past, these efforts can be frustrated if productive dealers elect to change brands.

<sup>54</sup> Calculations such as this can be affected by the timing of the change in the status of the outlets and of differences in the timing between years. That is, divesting a large number of outlets near year-end will tend to generate an inflated average

**Table 15. Motor Gasoline Distribution and Number of Direct-Supplied Branded Outlets for FRS Companies, 2007-2008**

	2007	2008	Percent Change 2007-2008
	<b>(Million Barrels)</b>		
Third-Party Volume			
Wholesale	1,961.4	2,064.9	5.3
Retail			
Dealer	794.8	796.4	0.2
Company-Operated	422.6	338.5	-19.9
Total Retail	1,217.4	1,134.9	-6.8
Direct	539.9	504.8	-6.5
Total Third-Party Volume	3,718.7	3,704.6	-0.4
Intersegment Volume	49.8	54.8	10.2
	<b>(Number of Direct-Supplied Branded Outlets)</b>		
Dealer Outlets	30,226	28,335	-6.3
Company-Operated Outlets	7,642	6,937	-9.2
Total Retail Outlets	37,868	35,272	-6.9
Average Monthly Outlet Volume	<b>(Thousand Gallons per Month)</b>		
Dealers	92.0	98.4	6.9
Company-Operated	193.6	170.8	-11.8
All Direct-Supplied Outlets	112.5	112.6	0.1

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Meanwhile, refinery capacity reported by the FRS companies increased by almost 6 percent (**Table 16**), primarily due to the addition of the joint ventures Hovensa (Hess and Petroleos de Venezuela, S.A.) and Deer Park (Shell and Petroleos Mexicanos), which more than offset the reduction in capacity from the sale of two refineries. BP spun-off its 125,600-barrels-per-day<sup>55</sup> Toledo, Ohio, refinery to the BP-Husky Refining LLC joint venture<sup>56</sup> and Valero sold its 80,000 barrels-per-day Krotz Spring, Louisiana refinery to Alon Refining.<sup>57</sup> Additionally, many of the companies made marginal expansions to their refineries,<sup>58</sup> increasing capacity in 2008.

sales volume while divesting a large number of outlets near year-beginning will tend to generate a depressed average sale volume.

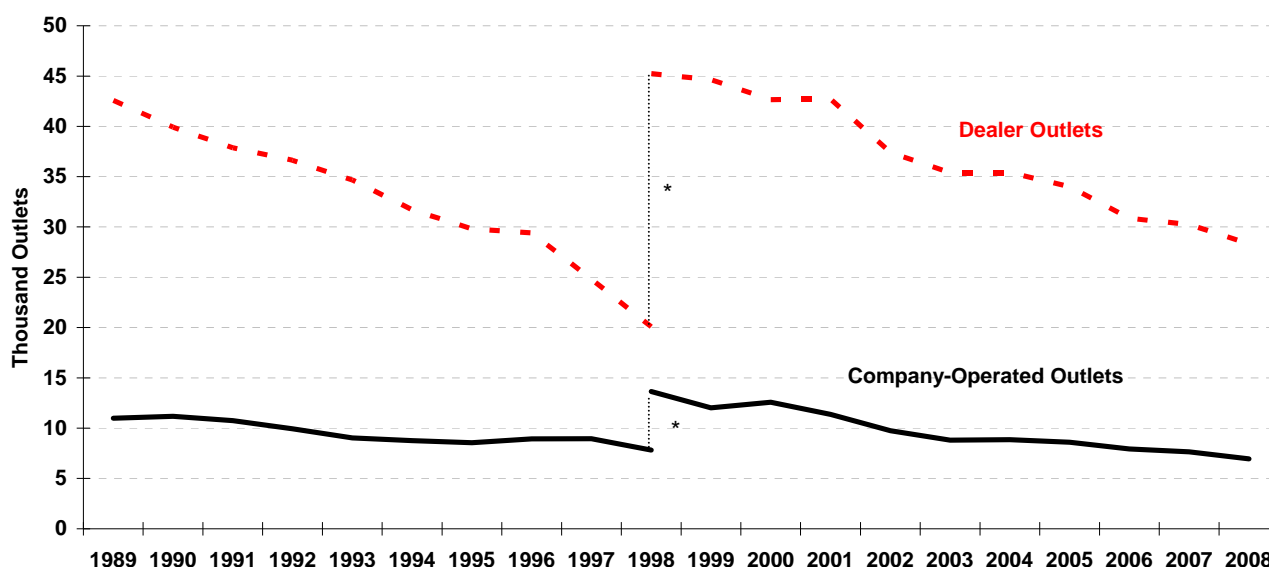
<sup>55</sup> All individual refinery capacities are from Energy Information Administration, "Refinery Capacity Report 2009" (June 25, 2009), Table 5, which available at [http://www.eia.doe.gov/oil\\_gas/petroleum/data\\_publications/refinery\\_capacity\\_data/refcapacity.html](http://www.eia.doe.gov/oil_gas/petroleum/data_publications/refinery_capacity_data/refcapacity.html) (as of October 20, 2009).

<sup>56</sup> BP, plc, 2008 U.S. Securities and Exchange Commission Form 20-F, p. 30.

<sup>57</sup> Valero Energy Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 43.

<sup>58</sup> For example, Chevron's projects to process heavier and higher sulfur crude oils at its Pascagoula, Mississippi refinery were completed during 2008 (Chevron Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 24). ConocoPhillips noted that "Debottlenecking of a crude and fluid catalytic cracking unit and completion of a new sulfur plant at the Ferndale refinery (see ConocoPhillips, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 62). Marathon continued expanding its Garyville, Louisiana refinery throughout 2008 (see Marathon Oil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 59) and began expanding its Detroit, Michigan refinery during 2008 (Marathon Oil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 13). Advancement of Motiva's \$7 billion expansion of its Port Arthur, Texas refinery continued (see Motiva Enterprises LLC, "Motiva Reaches Milestone in Refinery Expansion Project," press release (November 6, 2008));

**Figure 22. Company-Operated and Direct-Supplied Dealer Outlets for FRS Companies, 1989-2008**



\*The addition of 11 companies to the group of U.S. majors in 1998, the largest single-year change in the history of the Financial Reporting System, resulted in the vertical displacement of the series in 1998.

Note: Only outlets directly supplied by the FRS companies are included here.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Increased ability to process heavier and/or higher sulfur crude oil<sup>59</sup> and further environmental investments,<sup>60</sup> including those related to ethanol<sup>61</sup> and biofuel,<sup>62</sup> were the major motivations for the marginal investments. The combination of transactions and marginal upgrades resulted in a 16-percent increase in U.S. refining additions to net investment in place (**Table 16**).

For the last several years the relatively complex FRS refineries (**Table 17**) provided cost savings by taking advantage of price differences between the relatively lower-cost heavy crude oils and the relatively higher-cost

<sup>59</sup> Several companies noted such investment. For example, BP, Chevron, Exxon Mobil, and Marathon all indicated future plans for additional investment in upgrading capacity while Tesoro noted it had completed this type of investment in its Anacortes, Washington, and Hawaii refineries in 2008 (see BP plc, 2008 Annual Report on Form 20-F, p. 28; Chevron Corporation, U.S. Securities and Exchange Commission Form 10-K, p. 24; Exxon Mobil Corporation, 2008 *Financial and Operating Review*, p. 71; Marathon Oil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 13; and Tesoro Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, pp. 7 and 30).

<sup>60</sup> Several companies indicated that they continued making investments to expand their ability to make Phase II-compliant petroleum products in the present and into the future, including BP, Chevron, ConocoPhillips, Exxon Mobil, Marathon, Sunoco, Tesoro, and Valero (see BP plc, 2008 U.S. Securities and Exchange Commission Form 20-F, p. 27; Chevron Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 24; ConocoPhillips Company, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 62; Clanton, Brett, "Exxon Mobil Plans \$1 Billion in Diesel Refining Upgrades," *Houston Chronicle* (December 15, 2008); Marathon Oil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 59; Sunoco Inc., 2008 U.S. Securities and Exchange Commission Form 10-K, p. 5; Tesoro Energy Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 6; and Valero Energy Corporation, 2007 U.S. Securities and Exchange Commission Form 10-K, p. 13).

<sup>61</sup> Shell "announced a joint research and development project to convert plant sugars directly into gasoline and gasoline-blend components (see Royal Dutch Shell, plc, 2008 U.S. Securities and Exchange Commission Form 20-F, p. 44)."

<sup>62</sup> BP is focusing on biofuel (see Clanton, Brett, "BP Takes a Step Toward Investing in Nonfood Biofuel," *Houston Chronicle* (August 7, 2008)).

**Table 16. U.S. and Foreign Refining/Marketing Investment and Refining Operating Items for FRS Companies, 2007-2008**

	2007	2008	Percent Change 2007-2008
	(2008 Billion Dollars)		
U.S. Refining Additions to Investment in Place	17.4	20.3	16.2
U.S. Marketing and Transportation Additions to Investment in Place	3.5	5.6	61.1
Foreign Refining/Marketing Additions to Investment in Place	3.9	4.3	10.6
	24.8	30.2	21.6
	(Thousand Barrels per Day)		
U.S. Refining Capacity	14,101	14,880	5.5
U.S. Refinery Output	14,168	14,519	2.5
Foreign Refining Capacity	5,571	5,461	-2.0
Foreign Refinery Output	5,008	4,998	-0.2
	(Percent)		
U.S. Refinery Utilization Rate <sup>1</sup>	88.6	87.2	(2)
Foreign Refinery Utilization Rate <sup>1</sup>	85.3	84.3	(2)

<sup>1</sup>Refinery utilization rate is calculated by dividing runs to stills at own refineries by the average of the year beginning and year ending crude oil distillation capacity.

<sup>2</sup>Not meaningful.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table 17. U.S. Refinery Configurations of the FRS Companies, Selected Years, 1974-2008 (Percent)**

	Downstream Capacity as a Percent of Crude Distillation Capacity														
	1974	1981	1993	1996	1997	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>FRS Integrated Refiners<sup>a</sup></b>															
Coking	n.c.	n.c.	n.c.	13.0	12.6	12.9	13.9	14.1	15.8	15.4	15.7	15.4	15.4	15.9	15.7
Catalytic cracking	27.7	30.4	36.5	33.8	35.9	35.8	35.6	35.2	33.0	33.4	33.7	33.7	33.9	33.4	33.6
Catalytic reforming	17.6	22.4	25.8	24.9	23.4	22.3	22.4	22.2	21.8	21.8	21.8	21.4	21.7	21.9	21.4
Hydro cracking	5.6	5.7	9.6	9.6	9.6	10.9	11.0	10.9	10.7	10.4	10.7	10.5	11.0	11.4	11.2
Catalytic hydrotreating	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	79.5	82.3	85.8	88.0	87.3
Alkylation	4.8	5.3	7.7	6.8	7.5	7.4	7.4	7.2	7.1	7.2	7.3	7.3	7.5	7.1	7.3
<b>FRS Non-Integrated Refiners<sup>b</sup></b>															
Coking	n.c.	n.c.	n.c.	11.0	12.7	12.0	12.1	12.4	12.0	13.5	14.7	14.3	14.4	14.4	14.7
Catalytic cracking	n.c.	n.c.	n.c.	29.8	34.1	34.0	35.5	35.5	36.3	36.7	38.4	37.2	37.2	37.1	37.4
Catalytic reforming	n.c.	n.c.	n.c.	18.9	21.5	22.5	21.9	21.7	21.4	21.1	21.8	20.4	20.1	20.6	20.8
Hydro cracking	n.c.	n.c.	n.c.	6.3	7.8	8.6	8.6	8.4	7.8	8.5	8.7	8.1	8.3	8.4	9.1
Catalytic hydrotreating	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	n.c.	71.4	73.3	74.3	74.2	76.2
Alkylation	n.c.	n.c.	n.c.	6.0	6.8	6.0	6.3	6.3	6.4	6.4	6.9	6.6	6.6	6.6	6.7

n.c.: Information not collected.

<sup>a</sup>:FRS Integrated Refiners includes BP America, Chevron, ConocoPhillips, Exxon Mobil, Marathon, Shell Oil, and Total Holdings USA.

<sup>b</sup>: FRS Non-Integrated Refiners includes CITGO, Lyondell Chemical (now LyondellBasell), Motiva, Sunoco, Tesoro, and Valero.

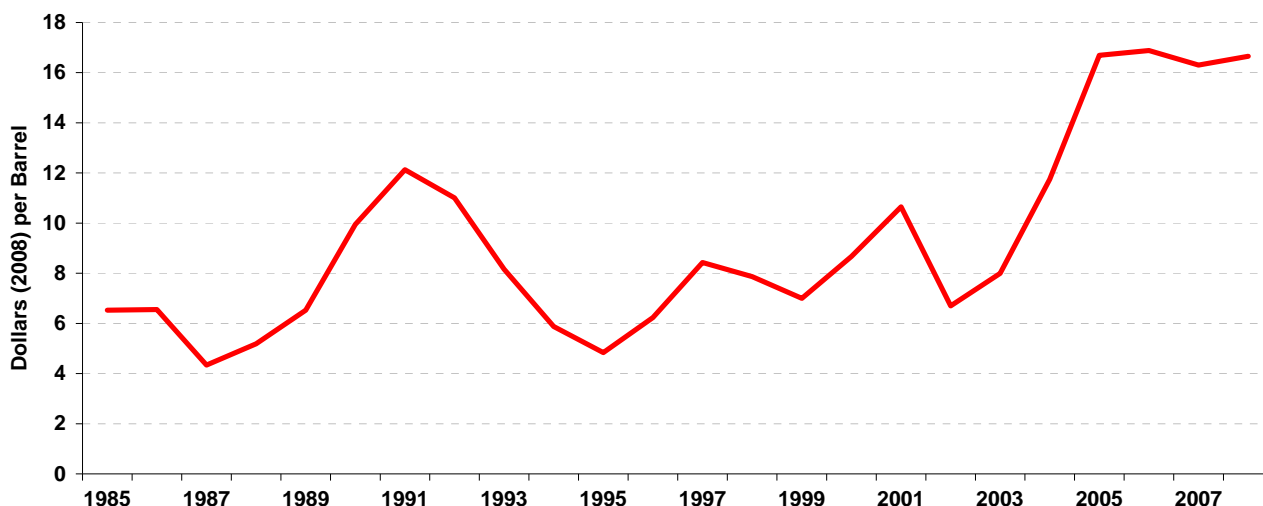
Sources: Oil and Gas Journal, "Worldwide Refinery Report," 1974, 1981, 1993, 1996, 1997, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, and 2008.

light crude oils because the refineries can refine a wide range of crude oils. Further, revenues were increased marginally because complex refineries can produce relatively more higher-priced, light products. However, the circumstances of 2008 increased the first aspect of the advantage of refining complexity while diminishing the second.

The difference between the prices of light crude oil and heavy crude increased slightly (**Figure 23**) as the discount paid for heavy crude oil rose from \$16.30 per barrel in 2007 to \$16.65 per barrel in 2008. However, the difference

between the price of lighter products (represented by the price of motor gasoline) and the price of heavier products (represented by the price of residual fuel oil) decreased (**Figure 24**) \$5.45 per barrel between 2007 and 2008. These changes put downward pressure on both raw materials costs and product revenues, but price increases in 2008 resulted in raw material costs rising 29 percent (**Table 12**) and product revenues increasing 25 percent (**Table 14**). However, as noted above, FRS companies continue to expand their capability to process heavy crude oil and increase production of light product.

**Figure 23. Price Difference Between Light Crude Oil and Heavy Crude Oil, 1985-2008**

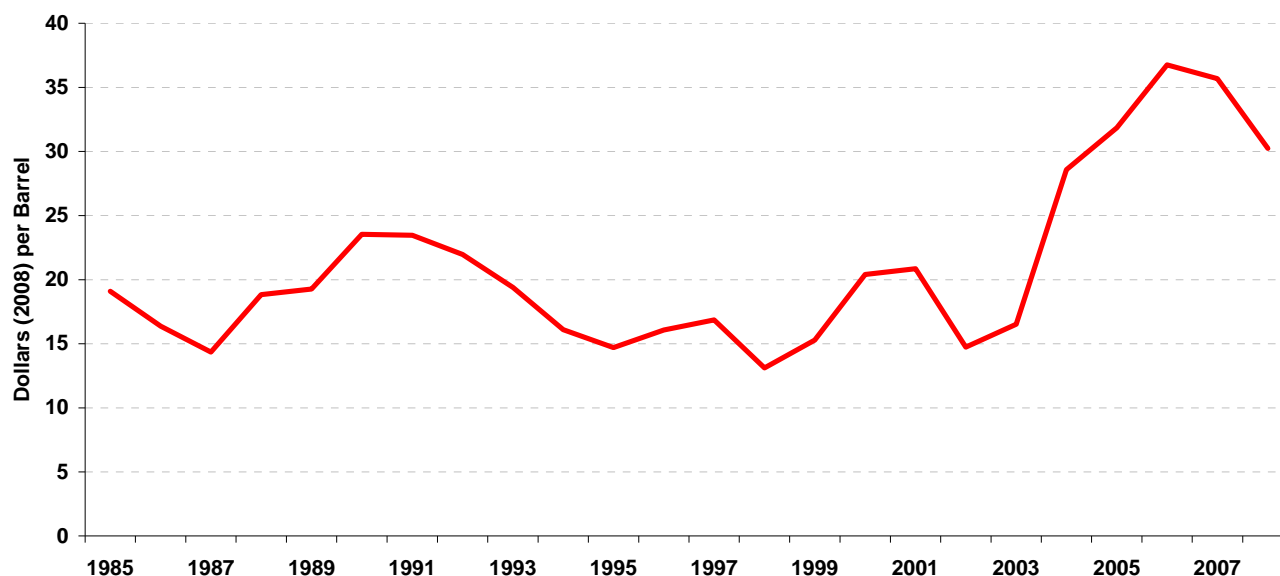


Note: Light crude oil tends to sell for a higher price per barrel than does heavy crude oil. Thus, the vertical distance of the line in the figure from the horizontal axis indicates the premium paid for light crude oil relative to heavy crude oil. The more expensive light crude oil is defined here as having an API gravity of 40.1 or greater and heavy crude oil is defined as having an API gravity of 20 or less.

Source: Energy Information Administration, *Petroleum Marketing Monthly*, DOE/EIA-0380, Tables 27 and 28 (2006 and earlier), and Tables 24 and 25 (2007, onward).

The year 2008 not only was one of the least profitable for U.S. refining/marketing operations in the 32-year history of the FRS, but it seemed all the more so by following on the heels of the three most profitable years in the history of the FRS. The primary reason for the decreased profitability of the FRS U.S. refining/marketing operations in 2008 relative to 2007 was a reduced gross refining margin (i.e., petroleum product prices increased by less than raw materials costs) and higher operating costs, both in general, and for all categories – marketing, energy costs, and “other” operating costs. The combination of these changes resulted in a 69-percent decrease in the net refining margin relative to 2007 to one of the lowest in the 32-year history of the survey. Rising costs provided incentives for FRS companies to realign their U.S. refining/marketing operations. The long-time divestiture of their motor gasoline retailing assets continued in 2008. So, too, did upgrading of refinery capacity continue in 2008, further expanding their ability to refine the lowest quality (and lowest cost) crude oils available. However, the apparent failure of these actions to prevent much higher operating costs in 2008 than in 2007 leads one to eagerly await the developments of 2009.

**Figure 24. Resale Price Difference Between Motor Gasoline and Residual Fuel Oil, 1985-2008**



Note: Motor gasoline tends to sell for a higher price per barrel than does residual fuel oil. Thus, the vertical distance of the line in the figure from the horizontal axis indicates the premium paid for motor gasoline relative to residual fuel oil.

Source: Energy Information Administration, *Petroleum Marketing Monthly*, DOE/EIA-0380, Table 4.

## Foreign Refining/Marketing<sup>63</sup>

In contrast to their 2008 domestic refining/marketing performance, the FRS companies reported the third-highest average profit rate for their foreign refining/marketing operations. The average profit rate of 26 percent was more than 4 percentage points higher than in 2007,<sup>64</sup> which was at the time the third-highest in the history of the FRS (**Figure 18**). Refined product and other revenue increased by more than \$59 billion relative to 2007, which exceeded the \$55-billion increase in operating expense and resulted in a \$4-billion increase (37 percent) in operating income and slightly more than a \$1.7-billion increase (18 percent) in net income (**Table 14**).

The FRS companies derive their foreign refining/marketing earnings from two sources: consolidated operations and unconsolidated affiliates. A fully consolidated affiliate is directly controlled by the parent corporation (although it could be owned by several companies, with the parent corporation retaining control). In addition, public financial disclosures of the parent corporation include all operating financial information about a fully consolidated affiliate (such as revenues). Conversely, the corporate parent of an unconsolidated affiliate usually owns 50 percent, or less, of the affiliate, and does not directly control the affiliate<sup>65</sup> (a joint venture, for example, is usually an unconsolidated affiliate from the perspective of at least one of the partners). Essentially, the unconsolidated affiliate is more of a property or holding of the parent corporation than a company that the parent

<sup>63</sup> For this report, the International Marine and Foreign Refining/Marketing business segments are combined to prevent disclosure of company-level data. Relative to Foreign Refining/Marketing, International Marine is about one-tenth the size and has little material effect on the overall results of Foreign Refining/Marketing.

<sup>64</sup> The large number of asset sales that occurred during 2008 would tend to inflate the ROI because the 2008 sales reduced the denominator of the calculation. More specifically, net investment in place fell \$90 million between 2007 and 2008.

<sup>65</sup> The actual percentage of ownership necessary to convey control of an entity is open to debate and, for some purposes, can be as little as 10 percent.

actually operates. The effect on financial operations of an unconsolidated affiliate can be seen only on the parent corporation's income statement, on which the parent company reports its proportional share of the affiliate's net income.

Historically, approximately half of the FRS consolidated foreign refinery capacity is located in Europe, 51 percent in 2008 (**Table 18**), with most of the remaining consolidated refinery capacity in Asia. The operations of the FRS companies' unconsolidated foreign refining/marketing affiliates have been mainly in Asia with Chevron the primary owner of unconsolidated FRS Asian refinery capacity.

**Table 18. Regional Distribution of Foreign Refinery Capacity for FRS Companies, 2007-2008**  
(Percent)

	Consolidated Operations		Unconsolidated Affiliates	
	2007	2008	2007	2008
<b>Europe</b>	50.7	51.1	8.8	9.0
<b>Asia</b>	24.7	24.1	76.5	76.5
<b>Latin America</b>	8.6	8.7	0.3	0.3
<b>Canada</b>	13.5	13.6	0.0	0.0
<b>Other</b>	2.4	2.4	14.4	14.2
<b>Grand Total</b>	100.0	100.0	100.0	100.0

Note: The region denoted as "Other" includes Africa and the Middle East.

Sources: Company Annual Reports and filings of U.S. Securities and Exchange Commission Form 10-K.

The increase in net income between 2007 and 2008 in FRS foreign refining/marketing operations was due to increased income from both consolidated and unconsolidated operations (**Figure 25**). Mainly due to the decrease in North America, worldwide petroleum demand of 2008 decreased slightly relative to 2007 (**Figure 26**), yet company revenues increased substantially, in part due to higher product prices and trading gains. The companies identified some additional reasons for the increased profitability of FRS consolidated and unconsolidated foreign refining/marketing operations in public statements, including foreign currency gains,<sup>66</sup> increased refining and marketing margins,<sup>67</sup> improved refinery operations,<sup>68</sup> higher refinery utilization rates,<sup>69</sup> and refinery divestitures<sup>70</sup> (**Table 16**).

## Consolidated Operations

Earnings from the FRS companies' consolidated operations increased (**Figure 25**) more than \$1.6 billion (22 percent) between 2007 and 2008, providing \$9.2 billion of net income. The FRS consolidated operations

<sup>66</sup> Chevron Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, pp. FS-7 and FS-8.

<sup>67</sup> ConocoPhillips, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 48; and Exxon Mobil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 45..

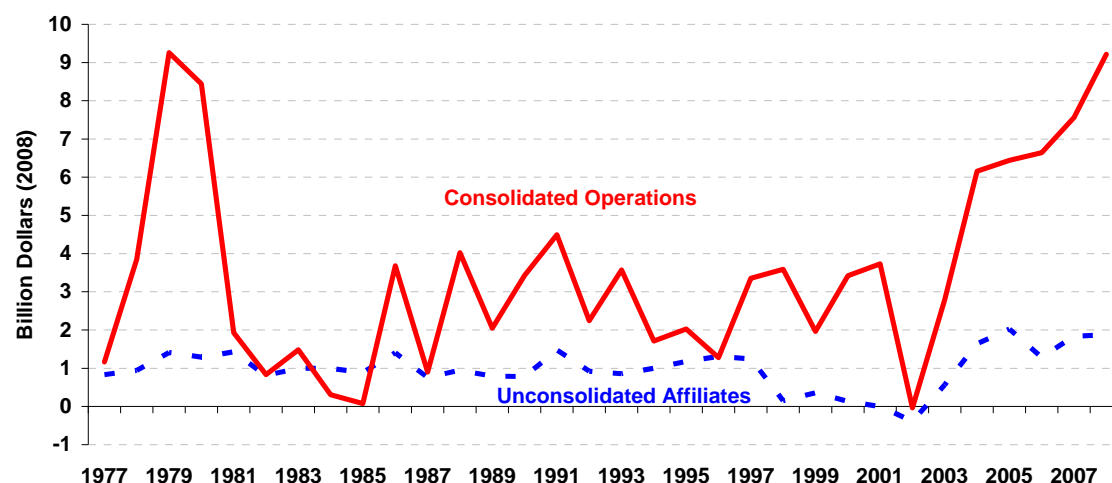
<sup>68</sup> Exxon Mobil Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 45.

<sup>69</sup> ConocoPhillips, 2008 U.S. Securities and Exchange Commission Form 10-K, p. 48.

<sup>70</sup> Chevron divested refinery capacity during 2008. Chevron sold its 31 percent interest (124,000-barrels-per-day) in the Nerefco (Netherlands) refinery in March 2007 (Chevron Corporation, 2007 U.S. Securities and Exchange Commission Form 10-K, p. 25). April 2, 2008 (Watkins, Eric, "Petrobras buys Into, Will Upgrade Nishihara Refinery," *Oil and Gas Journal* (April 2, 2008)).



**Figure 25. Foreign Refining/Marketing Net Income<sup>a</sup> from Consolidated Operations and Unconsolidated Affiliates of FRS Companies, 1977-2008**



<sup>a</sup>The International Marine business segment has been combined with Foreign Refining/Marketing for the years 2003 - 2007 in order to prevent disclosure of company-level data. Relative to Foreign Refining/Marketing, International Marine is about one-tenth the size and has little material effect on the overall results of Foreign Refining/Marketing.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

generated higher earnings by selectively upgrading (or expanding the number of) marketing outlets<sup>71</sup> and refinery capacity,<sup>72</sup> while divesting non-core assets, particularly retail assets.<sup>73</sup>

Higher earnings from consolidated FRS foreign refining/marketing operations occurred within an industry environment of higher gross refining margins and essentially unchanged (**Figure 26**) (0.8 percent lower) European petroleum demand. Further, the average European refining margin (represented by the Rotterdam/Brent reforming/cracking netback minus the West Texas Intermediate spot price) over all of 2008 was \$4.16 per barrel higher than the average margin for 2007 (**Figure 27**).

## Unconsolidated Operations

During 2008, the FRS companies' unconsolidated affiliates generated \$1.9 billion of net income, which was 3 percent higher than 2007. Higher earnings occurred despite essentially unchanged product demand. Consumption of petroleum products in Asia (comprising Asian Developing Countries, which grew 1 percent and Australia, Japan, and New Zealand, which collectively declined by 3 percent) scantily increased between 2007 and 2008 (**Figure 26**) by 0.2 percent.

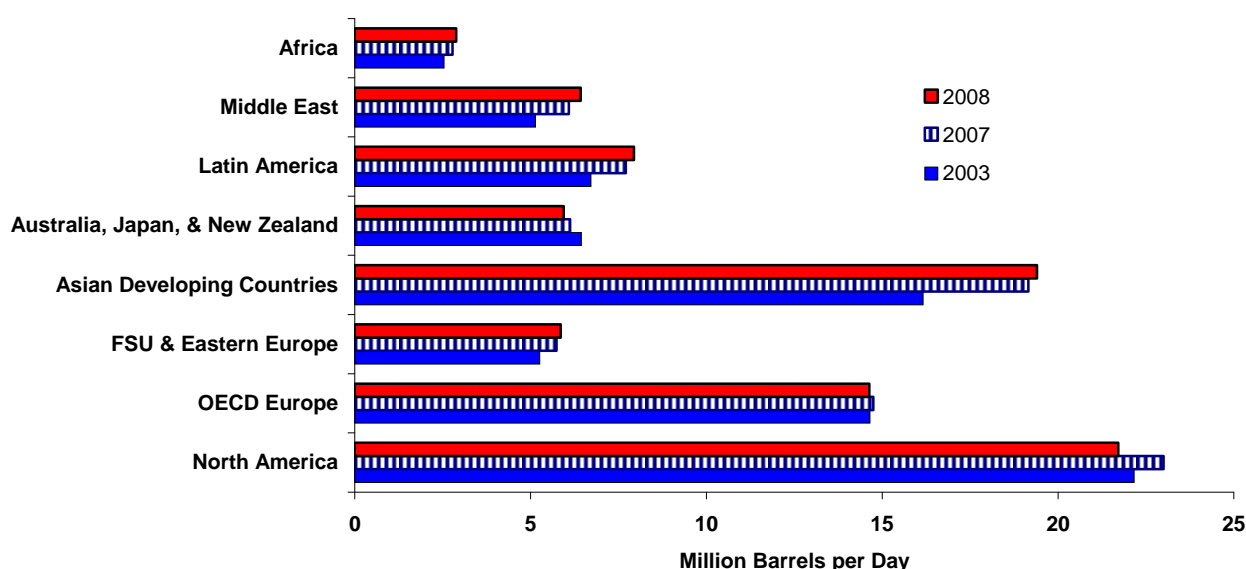
<sup>71</sup>Exxon Mobil uses "... an integrated approach when developing new business opportunities, an example of which is our refining, petrochemical, and fuels marketing venture in Fujian, China ... (Exxon Mobil Corporation, 2008 *Financial & Operating Review*, p. 75)."

<sup>72</sup>Chevron Corporation, 2008 *Supplement to the Annual Report*, p. 46; ConocoPhillips, 2008 *Fact Book*, p. 47; and Exxon Mobil Corporation, 2008 *Financial and Operating Review*, p. 75.

<sup>73</sup>"During 2008, ConocoPhillips sold all fueling stations in Norway, Sweden and Denmark to Statoil (ConocoPhillips, 2008 *Fact Book*, p. 48)."

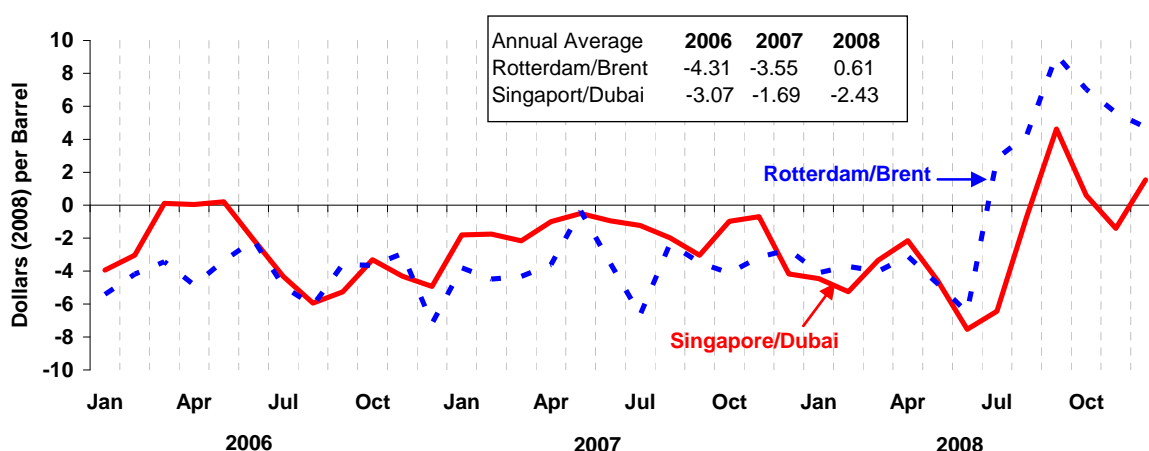


Figure 26. Petroleum Consumption by Region, 2003, 2007, and 2008



Note: OECD stands for the Organization for Economic Cooperation and Development.  
Source: BP plc, *BP Statistical Review of World Energy* (June 2009), p. 11.

Figure 27. Foreign Gross Refining Margins,<sup>a</sup> 2006-2008



<sup>a</sup>Gross refining margin is defined as netback crude oil price less spot crude oil price. The netback price is calculated by multiplying the spot price of each refined product by the percentage share in the yield of a barrel of crude oil. Transport and out-of-pocket refining costs are then subtracted to arrive at netback price.

Note: The gross refining margin for Dubai crude oil refined in Singapore is used a proxy for Asia/Pacific gross refining margins. Similarly, the gross refining margin for Brent crude oil refined in Rotterdam is used as a proxy for European gross refining margins.

Sources: Energy Intelligence Group, *Oil Market Intelligence* **2006**: January 2007 and July 2006, p. 12; **2007**: January 2008 and July 2007, p. 12; and **2008**: January 2009, December 2008, and July 2008, p. 12.

Industry-wide Asian refining margins of 2008 were lower than those of 2007 through July and then were consistently higher for the balance of the year (**Figure 27**) (except in November). The result of these two trends was a small decline in the 2008 average annual gross refining margin for Asia (represented by the Singapore/Dubai topping/reforming netback minus the West Texas Intermediate spot price) compared to that of 2007.

Despite these industry conditions the FRS earnings from their unconsolidated foreign refining/marketing operations reached a new all-time high, exceeding the previous high of 2007 by \$45 million. Company public disclosures included some reasons for the higher earnings generated by the Asian (and other unconsolidated) operations of the FRS companies, which included trading and foreign exchange gains.<sup>74</sup> Additionally, lower feedstock costs during the second half of the year contributed to higher refining margins. Cost-cutting efforts included divesting refinery capacity and refocusing marketing operations.<sup>75</sup>

FRS companies' foreign refining/marketing earnings increased substantially despite essentially unchanged worldwide petroleum product consumption (-0.4 percent). Trading gains, foreign currency effects, and higher industry gross refining margins in Europe contributed to increased profitability in 2008 relative to 2007. However, present trading and foreign exchange gains hold no promise of similar future gains. Thus, longer-term strategies such as enhancement of operations<sup>76</sup> and cost-cutting measures, such as increasing cogeneration capacity,<sup>77</sup> likely will continue to occupy prominent positions in the companies' ongoing strategic actions in the future.

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<sup>74</sup> Chevron Corporation, 2008 U.S. Securities and Exchange Commission Form 10-K, pp. FS-7 and FS-8.

<sup>75</sup> Exxon Mobil sold its interest in the 110,000-barrels-per-day Nishihara, Japan refinery on Okinawa to Petrobras, S.A. (see Watkins, Eric, "Petrobras Buys Info, Will Upgrade Nishihara Refinery," *Oil and Gas Journal* (April 2, 2008)). Chevron sold its fuels marketing businesses in Nigeria and other parts of western Africa, including its 3 percent ownership in the 63,990 barrels-per-day Abidjan, Ivory Coast refinery and its 8 percent ownership in the 37,000 barrels-per-day Cape Limboh, Cameroon refinery, during 2008 (see Chevron Corporation, "Chevron Sells Fuels Marketing Business in Nigeria," press release (September 19, 2008) and "Chevron Sells Fuels Marketing Businesses in Western Africa," press release (September 22, 2008)).

<sup>76</sup> For example, Exxon Mobil's strategy for improving its refining margins and its operating efficiency focused on enhancing its refinery capacity, reducing its raw materials costs, maximizing the value generated by its product offerings; improving energy efficiency; and operating at cost-effective operational scales. Exxon Mobil is also increasing the low-sulfur diesel productive capacity. (see Exxon Mobil Corporation, 2008 *Financial and Operating Review*, pp. 75-77).

<sup>77</sup> Exxon Mobil Corporation, "Exxon Mobil Increases Global Cogeneration Capacity," press release (March 23, 2009).

# About the Financial Reporting System Companies

## Changes in the Financial Reporting System Companies for the 2008 Reporting Year

For the 2008 reporting year, 27 major energy companies (**Table 19**) reported their financial and operating data to the Energy Information Administration's (EIA) Financial Reporting System (FRS) on Form EIA-28. The number of companies (referred to as the FRS companies in this report) increased by two from 2007 with the addition of Hovensa and the recently created WRB Refining LLC.

**Table 19. The FRS Companies in 2008**

Alenco	Hovensa
Anadarko Petroleum Corporation	Lyondell Chemical Corporation
Apache Corporation	Marathon Oil Corporation
BP America, Inc.	Motiva Enterprises, L.L.C.
Chesapeake Energy Corporation	Occidental Petroleum Corporation
Chevron Corporation	Shell Oil Company
CITGO Petroleum Corporation	Sunoco, Inc.
ConocoPhillips	Tesoro Petroleum Corporation
Devon Energy Corporation	The Williams Companies, Inc.
El Paso Corporation	Total Holdings USA, Inc.
EOG Resources, Inc.	Valero Energy Corp.
Equitable Resources, Inc.	WRB Refining LLC
Exxon Mobil Corporation	XTO Energy, Inc.
Hess Corporation	

Note: See "Historical Respondent Company List" on the Energy Finance page for the list of FRS respondents from 1974 forward. Five of the FRS companies are owned by foreign companies: Alenco -- owned by Encana; BP America—owned by BP plc; CITGO -- owned by Petroleos de Venezuela, S.A.; Shell Oil—owned by Royal Dutch Shell plc.; and Total Holdings USA—owned by Total S.A.

Hovensa, a refinery joint venture between Hess Corporation and Petroleos de Venezuela, S.A. (PdVSA, the state oil company of Venezuela) is a 500,000 barrels-per-day refinery on the island St. Croix in the U.S. Virgin Islands. The joint venture began in 1998.<sup>78</sup>

WRB Refining LLC, a 50/50 downstream joint venture between ConocoPhillips and EnCana Corporation, the parent company of the FRS respondent Alenco. Established in 2007, ConocoPhillips contributed its 306,000 barrels-per-day Wood River, Illinois, and 146,000 barrels-per-day Borger, Texas, refineries to the joint venture. EnCana contributed the heavy oil production operations associated with the related upstream the joint venture.<sup>79</sup>

Additionally, Shell Oil Company consolidated the Deer Park refinery joint venture between Shell Oil and Petroleos Mexicanos (Pemex, the state oil company of Mexico) for FRS reporting, but Deer Park was not added as a separate respondent company.

Although the composition of the FRS group of companies changes over time, the changes usually are incremental, as evident from the above discussion. A company is added to the survey when, through growth or acquisition, it meets the criteria classifying it as a major energy company. Typically, no more than two companies are added to

<sup>78</sup> Additional information is available at Hovensa's web site, <http://www.hovensa.com/index.html>, and its "Who We Are" page (<http://www.hovensa.com/who.html>) (both web addresses as of October 27, 2009).

<sup>79</sup> ConocoPhillips, "ConocoPhillips and EnCana Complete Transaction," news release (January 3, 2007); and "ConocoPhillips and EnCana to Create Integrated North American Heavy Oil Business," news release (October 5, 2006).

the survey in any given year. The new companies usually are relatively small compared to the existing FRS group, so the effect on the aggregate totals is marginal. The year 1998 was an exception. Because of a change in the FRS criteria, 11 companies were added to the FRS group. Companies rarely exit unless through merger, in which case the assets of the exiting company are absorbed into the surviving company. Thus, despite occasional year-to-year changes in the FRS group composition, comparisons are still meaningful and informative.

## The FRS Companies' Importance in the U.S. Economy

The FRS companies occupy a significant position in the U.S.<sup>80</sup> economy. In 2008, operating revenues of the FRS companies totaled \$1.818 trillion, which is equal to 17 percent of the \$10.688 trillion in revenues of the Fortune 500 corporations.<sup>81,82</sup>

The reporting companies engage in a wide range of business activities, but their most important activities are in the energy sector. They derived about 95 percent, or \$1,982 billion, of allocated operating revenues<sup>83</sup> from energy lines of business and derived nearly all of these revenues from their core petroleum operations (**Figure 28**). A majority of these companies are multinational, with 39 percent of the majors' net investment located abroad. Worldwide petroleum and natural gas market developments are of primary importance to these companies' financial performance.

In 2008 the FRS companies accounted for 41 percent of total U.S. crude oil and natural gas liquids (NGL) production,<sup>84</sup> 43 percent of natural gas production, 77 percent of U.S. refining capacity, and 0.2 percent of U.S. electricity net generation (**Figure 29**). During 2007, these companies devoted about 83 percent of their assets and 85 percent of new investments to sustaining various aspects of petroleum production, processing, transportation, and marketing.

Energy production, other than petroleum, has been a relatively small but growing part of the FRS companies' operations since 1994. During 2008, the combined operating revenues of the downstream natural gas, electricity, and other energy operations<sup>85</sup> of the FRS companies totaled \$354 billion, or 17 percent of allocated revenues. An FRS respondent divested its electricity generation capacity, resulting in a decline in the FRS share of U.S. electricity generation capacity from 0.5 percent in 2007 to 0.2 percent in 2008, leaving electricity trading activity as the primary FRS involvement in electricity.

Non-energy businesses, mainly chemicals, accounted for 5 percent, or \$112 billion, of the FRS companies' allocated revenues in 2008. During the 1980s, the FRS companies were major producers of domestic uranium. However, FRS domestic production of uranium oxide last occurred in 1991.

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<sup>80</sup> For the purposes of this report, the term "United States" includes the 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.

<sup>81</sup> Unless otherwise indicated, all dollar values and percentage changes in this report are in constant 2008 dollars, adjusted using the gross domestic product implicit price deflator.

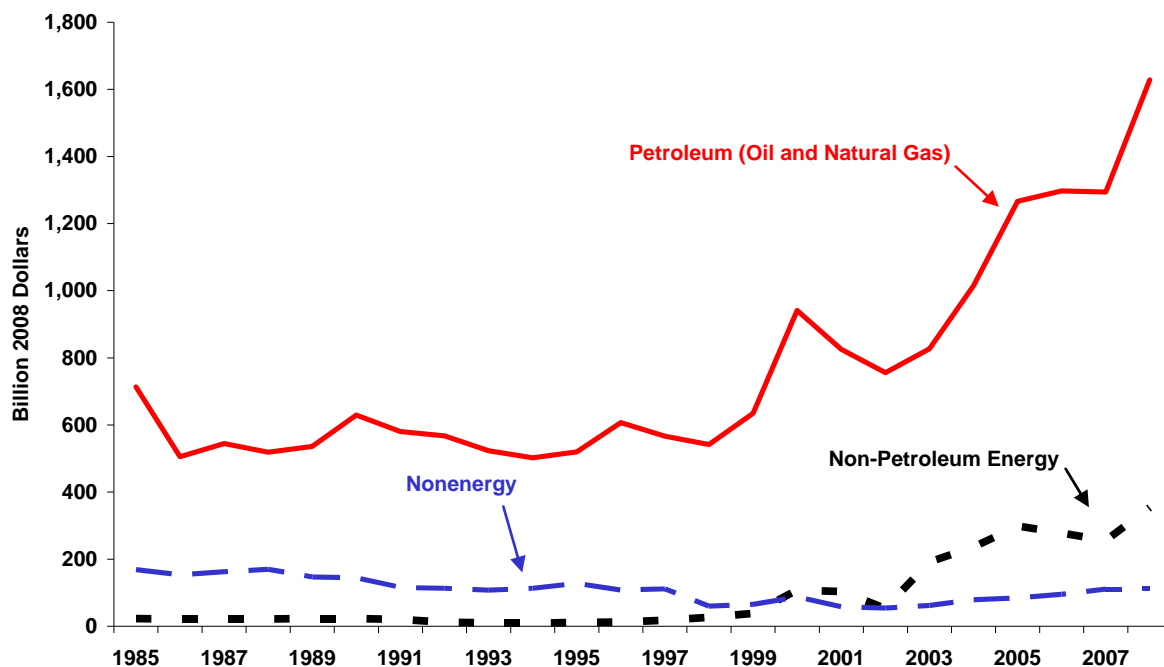
<sup>82</sup> The Fortune 500 is a list of the 500 largest U.S. corporations, ranked by revenues, published annually by *Fortune* magazine ([http://money.cnn.com/magazines/fortune/fortune500/2009/full\\_list/](http://money.cnn.com/magazines/fortune/fortune500/2009/full_list/) [as of October 27, 2009]).

<sup>83</sup> The sum of allocated operating revenue (\$2,094 billion) exceeds corporate operating revenue (\$1,818 billion) because allocated revenues include revenues from sales within the company and between different lines of business, in addition to the revenue from sales by the company to third parties (i.e., those outside the company). However, revenues from intersegment sales are eliminated in calculating corporate operating revenue, which includes only sales by the company to third parties.

<sup>84</sup> Note that U.S. totals include royalty production, while the FRS companies' production levels do not. Thus, these calculations understate the FRS companies' share of crude oil and NGL production and natural gas production.

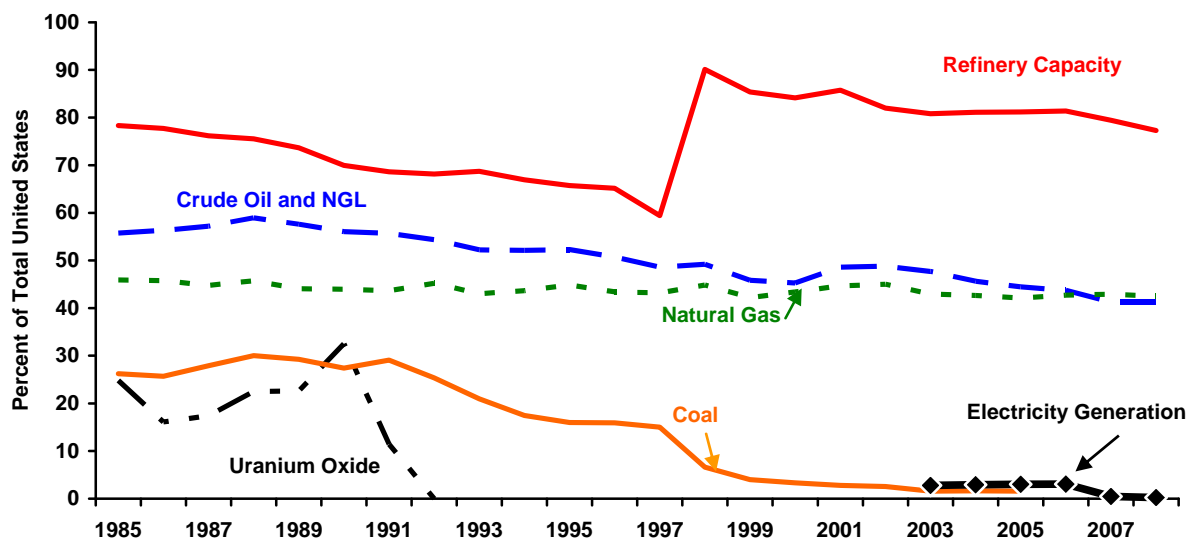
<sup>85</sup> Other energy operations include coal, nuclear, and non-conventional fuels.

Figure 28. Operating Revenues by Line of Business for FRS Companies, 1985-2008



Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Figure 29. Shares of U.S. Energy Production<sup>a</sup> and Refinery Capacity for FRS Companies, 1985-2008



<sup>a</sup>Oil and natural gas production for the FRS companies includes only the production that is owned by the FRS companies; it does not include any interests not owned by the FRS companies (e.g., royalty interests owned by others). Total production for the United States includes the interests of all owners.

Note: The FRS companies last produced uranium in 1991 and coal production data was last collected in 2005.

Sources: Table B1; Total industry uranium oxide production is from Energy Information Administration, *Uranium Industry Annual 1992*, DOE/EIA-0478(92) (Washington, DC, October 1993).



## About Performance Profiles

The Energy Information Administration (EIA)'s *Performance Profiles of Major Energy Producers* is a comprehensive annual financial review and analysis of the domestic and worldwide activities and operations of the major U.S.-based energy-producing companies. *Performance Profiles* primarily examines companies' operations on a consolidated corporate level, by individual lines of business, by major functions within each line of business, and by geographic regions. The review focuses on annual aggregate changes in profits, cash flow, and investment in the United States and international energy industry resulting from major energy companies' current operations. *Performance Profiles* also explores changes in the majors' exploration and development expenditures and their success in finding and developing oil and natural gas reserves. The analysis in this report is based on detailed financial and operating data submitted each year to the EIA on Form EIA-28, the Financial Reporting System (FRS). The FRS companies derive the bulk of their revenues and income from petroleum operations, which includes natural gas production. EIA supplements the FRS data with additional information from the companies' annual reports and press releases, disclosures to the U.S. Securities and Exchange Commission, news reports and articles, and complementary energy industry data.

**Lines of Business.** The FRS collects financial and operating information for the combined corporate entity and by lines of business within the company. The lines of business consist of petroleum, downstream natural gas (including natural gas liquid processing and natural gas pipelines), electric power, nonenergy, and other energy (including coal, nuclear, renewable fuels, and nonconventional fuels). The petroleum line of business is further segmented into production (including oil and natural gas exploration, development, and production), refining/marketing, crude and petroleum product pipelines (for domestic petroleum), and international marine transport (for foreign petroleum).

**Authorities.** The information in *Performance Profiles* responds to the requirements of the FRS, found in Public Law (P.L.) 95-91, the Department of Energy Organization Act of 1977. The EIA is required to submit an annual data and analysis report on the FRS information to the Congress. The EIA considers the U.S.-based energy companies that respond to FRS Form EIA-28 to be U.S. majors. Per the requirements of P.L. 95-91, the EIA Administrator designates major energy-producing companies, selecting them from publicly available data, as respondents to the FRS. Currently, the EIA Administrator uses the following selection criteria: U.S.-based publicly owned companies or U.S.-based subsidiaries of publicly owned foreign companies that have at least 1 percent of either production or reserves of oil (crude oil and natural gas liquids) or natural gas in the United States, or 1 percent of either refining capacity or petroleum product sales in the United States.

**Uniqueness.** Because the EIA collects Form EIA-28 data on a uniform, segmented basis, the comparability of information across energy lines of business is unique to the FRS. For example, the FRS enables comparison of petroleum activities of the major U.S. energy companies (and financial returns attributable to these activities) to activities in other lines of energy business (e.g., coal and alternative energy, downstream natural gas, and electric power) or nonenergy areas (such as chemicals). Similarly, the FRS enables comparison of financial returns and operating results from domestic activities to results from foreign activities and operations. FRS respondents are also required to report upstream expenditures and data on reserves and production by specified world regions. This information often is not available in company annual reports.

**Related EIA Reports.** Other energy financial analysis reports are listed at <http://www.eia.doe.gov/emeu/finance/pubs.html>. Previously, *Performance Profiles* included a separate chapter on foreign investment trends and transactions in U.S. energy resources, assets, and companies. However, EIA now publishes this report, *Foreign Direct Investment in U.S. Energy*, separately. The report assesses the degree of foreign ownership of energy assets in the United States, as required under Section 657, Subpart 8, of P.L. 95-91. This act requires an annual report to Congress that presents "a summary of activities in the United States by companies which are foreign owned or controlled and which own or control United States energy sources and supplies."

**Additional Information.** Also, see *About the FRS Survey* for information concerning the format of Form EIA-28, important financial reporting concepts and accounting principles, and other information about the FRS. For a glossary of terms and definitions used in this report, see <http://www.eia.doe.gov/emeu/perfpro/glossary.html>. The FRS web site (<http://www.eia.doe.gov/emeu/finance>) provides information about P.L. 95-91 and Form EIA-28 and access to other related financial information.

**Data File Information.** Historical FRS data are available from EIA's File Transfer Protocol (FTP) site. These data, which cover the years 1977 through 2008, are published in EIA's annual editions of *Performance Profiles of Major Energy Producers*. The two types of data are 1) aggregate data from the FRS survey form and 2) multiyear tables (formerly known as Appendix B of *Performance Profiles of Major Energy Producers*). FRS 1977–2008 data files can be downloaded from the EIA FTP site by accessing the EIA energy finance page at <http://www.eia.doe.gov/emeu/finance/index.html>. For further assistance, please contact the National Energy Information Center by telephone at 202-586-8800, by fax at 202-586-0727, by TTY at 202-586-1181, or by e-mail at [infoctr@eia.doe.gov](mailto:infoctr@eia.doe.gov). For further information on FRS data, please contact Richard Yan by telephone at 202-586-1347, by fax at 202-586-9753, or by e-mail at [richard.yan@eia.doe.gov](mailto:richard.yan@eia.doe.gov).



## About the Financial Reporting System (FRS) Survey

**Authorities.** The Financial Reporting System (FRS) was established in 1977 under Section 205 (h) of the Department of Energy Organization Act (Public Law [P.L.] 91-95). This statute requires the Energy Information Administration (EIA) to "identify and designate major energy-producing companies" and to develop and implement a data reporting program for energy financial and operating information from these companies.

**Financial and Operating Information.** The FRS is designed to permit review of the functional performance of the major U.S. energy-producing companies in total, as well as by specific functions and geographic areas of operation. The financial reporting schedules obtain data on revenues, costs, and profits, thereby indicating financial flows and performance characteristics. In addition, Form EIA-28 collects balance sheet data (e.g., accumulated property, plant, and equipment), along with data on new investment in these accounts. To complement the financial data, the FRS includes a series of statistical schedules to trace physical activity patterns and to evaluate several physical and financial relationships.

**Confidentiality.** The EIA collects the information in accordance with the confidential information protection provisions of Title 5, Subtitle A, P.L. 107-347 and other applicable Federal laws and uses it for statistical purposes only. EIA keeps survey responses confidential and does not disclose the responses in identifiable form to anyone other than employees or agents without consent of the company. However, the EIA selects names of the companies based on publicly available information, which is not confidential and is publicly released.

**Uniform Basis.** The legislation establishing the FRS requires the reporting of individual company financial and operating data to be on a "uniform and standardized basis" so that the data can be aggregated and comparisons can be made across companies and groups of companies. The data permit the EIA to do the following:

- Develop a "statistically accurate profile of each line of commerce in the energy industry in the United States"
- Evaluate "company revenues, profits, cash flow, and investments in total"
- Analyze "the competitive structure of sectors and functional groupings within the energy industry"
- Segregate and describe company financial and operating data "by energy source and geographic area"
- Determine the costs associated with segmental energy functions such as "exploration, development, production, processing, transportation, and marketing"

**Accounting Information.** The legislation also required the EIA to consult with the U.S. Securities and Exchange Commission in an effort to be consistent with other Federal financial accounting practices. Accordingly, the FRS reporting form (Form EIA-28) necessarily incorporates a number of specific energy financial accounting principles and conventions. More information is available in the survey form's filing instructions (see below).

**Form EIA-28.** The reporting companies submit annual data to EIA on Form EIA-28. The FRS Form EIA-28 is available in Portable Document Format (PDF) file ([www.eia.doe.gov/emeu/perfpro/form/eia28\\_2008.pdf](http://www.eia.doe.gov/emeu/perfpro/form/eia28_2008.pdf)) and as an Excel spreadsheet ([ftp.eia.doe.gov/pub/energy/overview/frs/eia28\\_2008.xls](http://ftp.eia.doe.gov/pub/energy/overview/frs/eia28_2008.xls)). The 39-page form comprises 22 schedules. In addition, those companies that publicly disclose Financial Accounting Standard (FAS) 69 supplementary oil and gas information for the total of their equity investments' upstream expenditures, drilling activities, reserves, and production, are required to report this information on a subset of Form EIA-28 by the geographical regions of Schedules 5211, 5241, and 5246. The equity affiliate reporting form, Form EIA-28EA (in PDF, 470 KB) comprises four schedules and is 10 pages long.

The survey form's filing instructions are available for viewing as a PDF file at: [www.eia.doe.gov/emeu/perfpro/form/eia28\\_instructions\\_2008.pdf](http://www.eia.doe.gov/emeu/perfpro/form/eia28_instructions_2008.pdf). FRS survey data are available in Excel spreadsheets for viewing online or downloading to a personal computer.

Following is a breakdown of the form by schedule:

**\*Consolidated Company Operations\***

- Schedule 5100 - Classification Information
- Schedule 5110 - Consolidating Statement of Income
- Schedule 5111 - Research & Development Funding & Expenditures
- Schedule 5112 - Analysis of Income Taxes
- Schedule 5120 - Selected Consolidated Data (Balance Sheet)
- Schedule 5131 - Consolidated Statement of Cash Flows
- Schedule 5150 - Eliminations in Consolidation

**\*Petroleum Operations\***

- Schedule 5210 - Statement of Income
- Schedule 5211 - Refining, Exploration & Production Operations
- Schedule 5212 - Purchases & Sales of Raw Materials & Refined Products
- Schedule 5241 - Exploration, Development, & Production Statistics
- Schedule 5242 - Refining Statistics
- Schedule 5245 - Sources & Dispositions of Crude & NGL's
- Schedule 5246 - Proved Petroleum Reserves
- Schedule 5250 - Eliminations in Consolidation

**\*Downstream Natural Gas Operations\***

- Schedule 5710 - Statement of Income
- Schedule 5711 - General Operating Expense Detail
- Schedule 5712 - Purchases & Sales of Natural Gas and NGLs
- Schedule 5741 - Output Statistics

**\*Electric Power Operations\***

- Schedule 5810 - Statement of Income
- Schedule 5811 - General Operating Expense Detail
- Schedule 5812 - Purchases & Sales of Fuels and Electric Power
- Schedule 5841 - Capacity & Output Statistics

## Overview of 2008 Petroleum and Natural Gas Markets

- Crude oil, natural gas, and petroleum products prices all rose to record highs in the summer of 2008, before falling significantly by the end of 2008. On an average annual basis, crude oil prices increased 35 percent from 2007 (in constant 2008 dollars).<sup>86</sup> Natural gas wellhead prices increased 24 percent to \$8.07 per thousand cubic feet (mcf) in 2008. The prices of each of the major petroleum products rose to record highs, with gasoline increasing 16 percent.
- World oil demand decreased 0.5 million barrels per day (mmbd) to 85.5 mmbd (Table 20), the first decline since 1983.
- Worldwide reserve additions replaced 90 percent of oil production in 2008. The U.S. reserve replacement rate in 2008, however, was only 18 percent for oil, largely due to the decline in oil prices at the end of the year and the Securities and Exchange Commission rule requiring the use of year-end prices for determining reserves.
- U.S. petroleum product demand dropped 5.7 percent in 2008 to 19.5 mmbd (Table 21), the largest percentage decline since 1981.
- U.S. natural gas demand increased 0.7 percent in 2008 to 23.2 trillion cubic feet, while domestic natural gas production increased 7.7 percent, the largest increase in 25 years. U.S. natural gas reserves increased to their highest level since the Energy Information Administration (EIA) began reporting them in 1977.

The market overview section provides a brief review of prices, demand, and supply for petroleum and natural gas markets to give an indication of the general market conditions in which Financial Reporting System (FRS) companies operated in 2008.

The FRS companies' financial results for 2008 were driven primarily by record high prices for crude oil, petroleum products, and natural gas, tempered somewhat by lower consumption of petroleum, particularly in the United States which experienced its largest percentage decline since 1981. Crude oil prices (imported refiner acquisition cost) increased 35 percent from 2007, reaching an all-time high of \$92.77 per barrel while shattering the previous record set in 1981.<sup>87</sup> Natural gas wellhead prices increased 24 percent to \$8.07 per mcf in 2008, edging above the previous record from 2005.<sup>88</sup> Since 1998, crude oil prices have increased more than six times and natural gas prices over three times. Crude oil's rapid price increases have steadily widened the gap between crude oil and natural gas prices on a million-British-thermal-unit basis over the 2006-2008 period, compared to relatively narrow gaps for most of the decade before that (**Figure 30**).

Annual average prices, however, do not tell the whole story of price movements in 2008. Oil and natural gas prices increased significantly in the first half of 2008 but then fell even more substantially in the second half of the year. In contrast to the large increases in the annual average prices in 2008, oil and natural gas prices dropped 58 percent and 17 percent, respectively, in December 2008 compared to December 2007. This decline in year-end

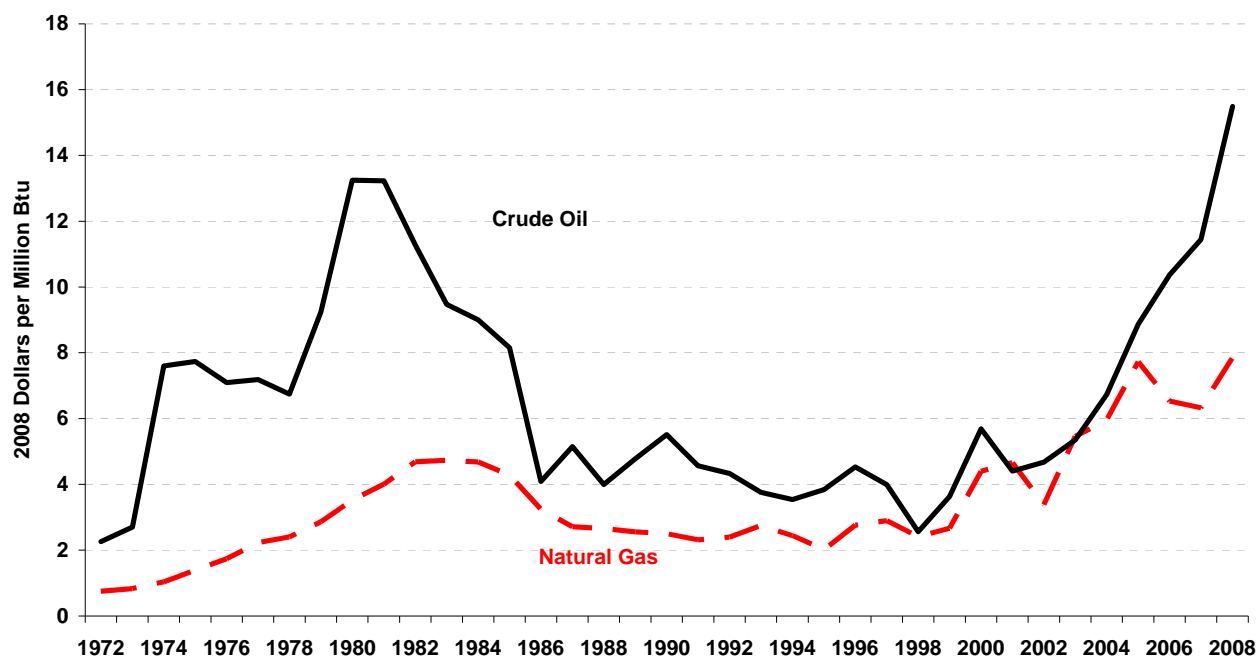
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<sup>86</sup> Unless otherwise indicated, all dollar values and percentage changes in this report are based in constant 2008 dollars, adjusted using the gross domestic product implicit price deflator.

<sup>87</sup> Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035 (2009/10) (Washington, DC, September 2009), Table 9.1.

<sup>88</sup> Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035 (2009/10) (Washington, DC, September 2009), Table 9.11.

Figure 30. Imported Refiner Acquisition Cost of Crude Oil and Natural Gas Wellhead Prices, 1972-2008



Source: Crude Oil Price: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035 (2009/09) (Washington, DC, September 2009), Table 9.1; Natural Gas Price: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035 (2009/09) (Washington, DC, September 2009), Table 9.11; Heat Content Factors: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035 (2009/09) (Washington, DC, September 2009), Tables A2 and A4.

prices caused the reported value of companies' reserves and other assets for 2008 to decline from 2007, as the valuation is based on prices prevailing at the end of the year.

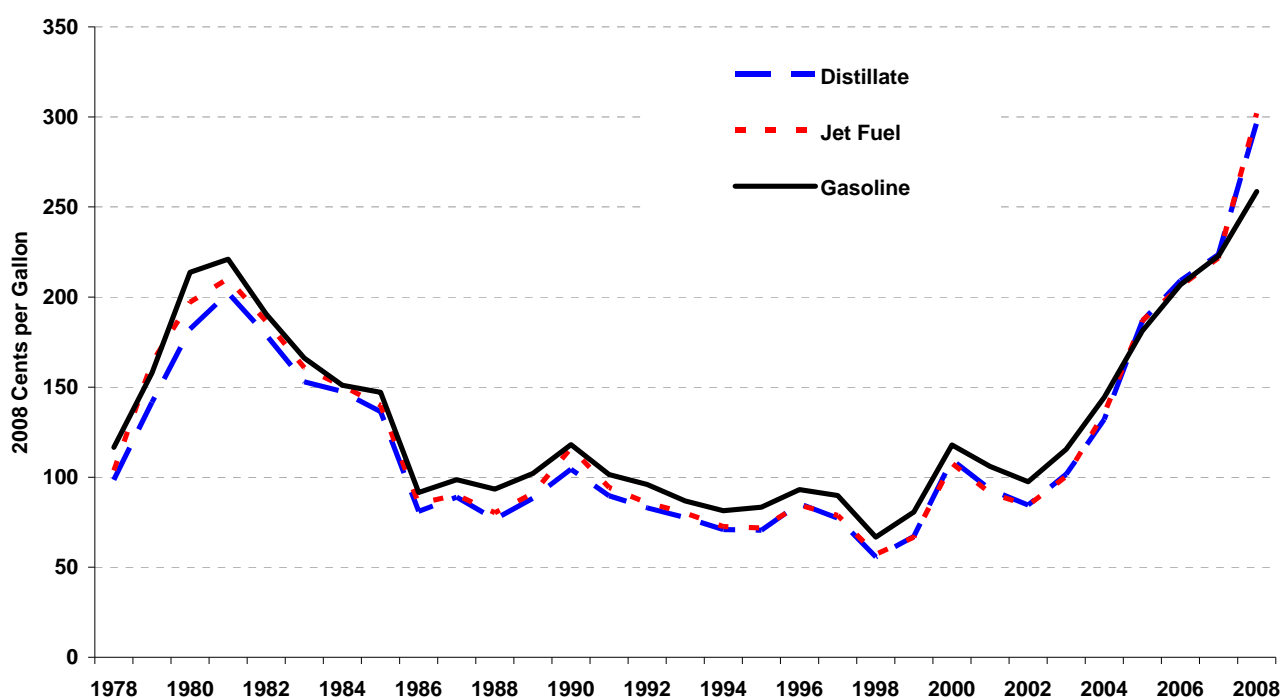
Gasoline, distillate, and jet fuel prices increased 16 percent, 33 percent, and 36 percent, respectively, in 2008, marking two successive years of the highest prices since EIA began reporting product prices in 1978 (**Figure 31**). Distillate and jet fuel prices remained tightly bunched, each increasing to about \$3 per gallon in 2008. But gasoline's smaller price increase left it about 40 cents per gallon lower than the other two fuels, the largest gap on record. Prior to 2005, gasoline prices had exceeded distillate every year since 1978 and jet fuel every year but one. By comparison, crude oil prices increased 35 percent.

World oil demand decreased 0.5 mmbd (0.6 percent) from the 2007 level to 85.5 mmbd in 2008 (**Table 20**). Demand growth had slowed considerably since the large increase in 2004 (**Figure 32**), but this was the first decline in world demand since 1983. Supply, which includes the production of crude oil, natural gas liquids (NGLs) and other liquids, and refinery processing gain, increased 1.0 mmbd (1.2 percent) in 2008 to 85.4 mmbd, falling just short of demand. Consequently, the gap between demand and supply in 2008 declined, leading to a decrease in petroleum inventories of 0.1 mmbd in 2008 that was much smaller than in 2007. Worldwide reserve additions replaced 90 percent of crude oil and NGL production in 2008. The reserve replacement rate for non-Organization of the Petroleum Exporting Countries was also 90 percent.<sup>89</sup>

Petroleum product demand (represented by petroleum product supplied) in the United States dropped 5.7 percent in 2008 to 19.5 mmbd (**Table 21**). This was the largest percentage decline since 1981 and follows 2 years of much smaller declines in U.S. petroleum demand. Consumption of all major petroleum products (gasoline, distillate fuel, jet fuel, and residual fuel) in 2008 declined, from 3.2 percent (297 mmbd) for gasoline up to 14.0 percent (101 mmbd) for residual fuel consumption (**Figure 33**).

<sup>89</sup> Calculated from reserves and production data in BP plc, *BP Statistical Review of World Energy* (June 2009), pp. 6, 8.

**Figure 31. Refiner Prices of Petroleum Products for Resale, 1978-2008**



Source: Energy Information Administration, Refiner Petroleum Product Prices by Sales Type, available on the Internet at [http://tonto.eia.doe.gov/dnav/pet/xls/pet\\_pri\\_refoth\\_dcu\\_nus\\_a.xls](http://tonto.eia.doe.gov/dnav/pet/xls/pet_pri_refoth_dcu_nus_a.xls) (as of October 19, 2009).

**Table 20. World Petroleum Balance, 2007-2008**  
(Million Barrels per Day)

Income Statement Items	Quarterly 2008				Annual	
	Q1	Q2	Q3	Q4	2007	2008
Demand	86.5	85.9	85.2	84.3	85.9	85.5
Supply	85.8	85.6	85.3	84.9	84.4	85.4
Supply from Inventories	0.7	0.3	-0.1	-0.7	1.5	0.1

Note: Supply from Inventories includes statistical discrepancy.

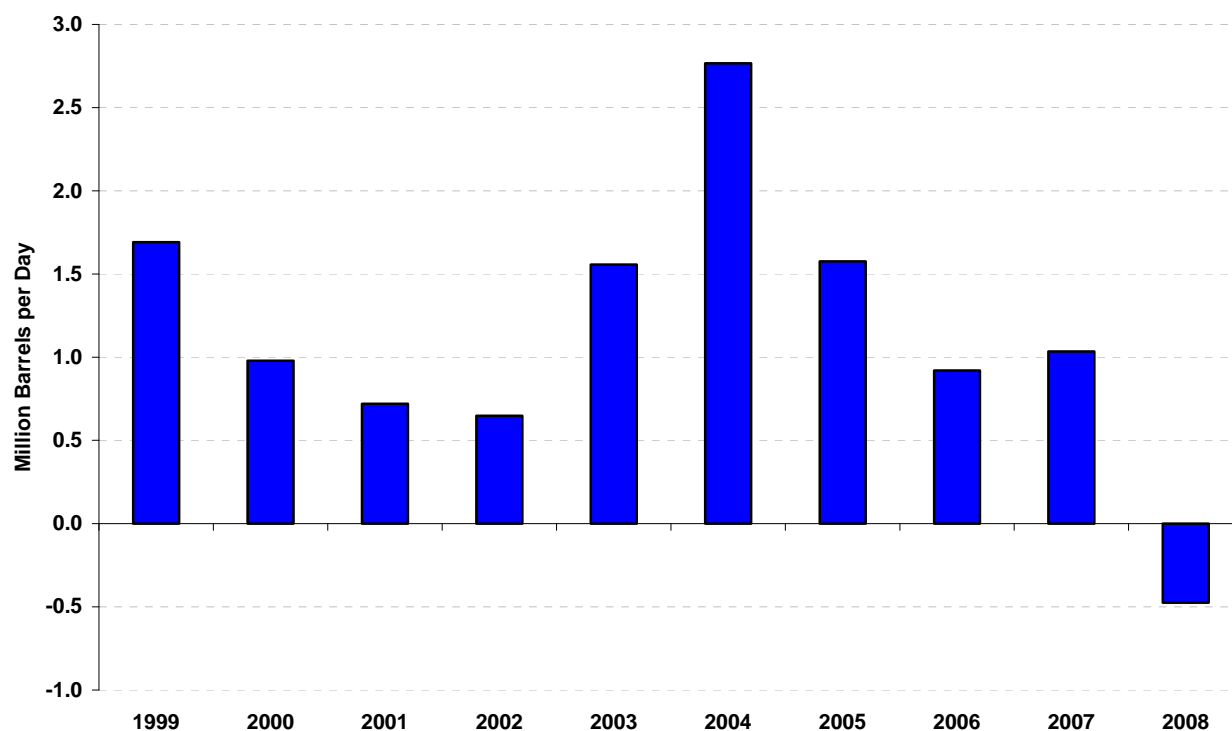
Source: Energy Information Administration, *International Petroleum Monthly* (September 2009), Table 2.1.

Domestic crude oil production fell 114,000 barrels per day (2.2 percent) in 2008 from 2007, while NGL production held nearly constant. Net imports of petroleum decreased by 922,000 barrels per day (7.7 percent) in 2008. The excess of petroleum product supply over demand led to an injection of 195,000 barrels per day into petroleum product inventories.

Crude oil and NGL reserve additions in the United States in 2008 fell short of production with a combined reserve replacement rate of 18 percent.<sup>90</sup> This happened largely due to the decline in oil prices at the end of the year and

<sup>90</sup> Reserve additions include revisions and adjustments, net sales and acquisitions, and total discoveries. Energy Information Administration, *Advance Summary: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves 2008 Annual Report* (October 2009), Table 3.

**Figure 32. World Oil Consumption, Change from Previous Year, 1999-2008**



Source: Energy Information Administration, *International Petroleum Monthly*, September 2009, Table 4.6, available on the Internet at <http://www.eia.doe.gov/ipm/> (as of October 19, 2009).

**Table 21. U.S. Petroleum Balance, 2007-2008**  
(Million Barrels per Day)

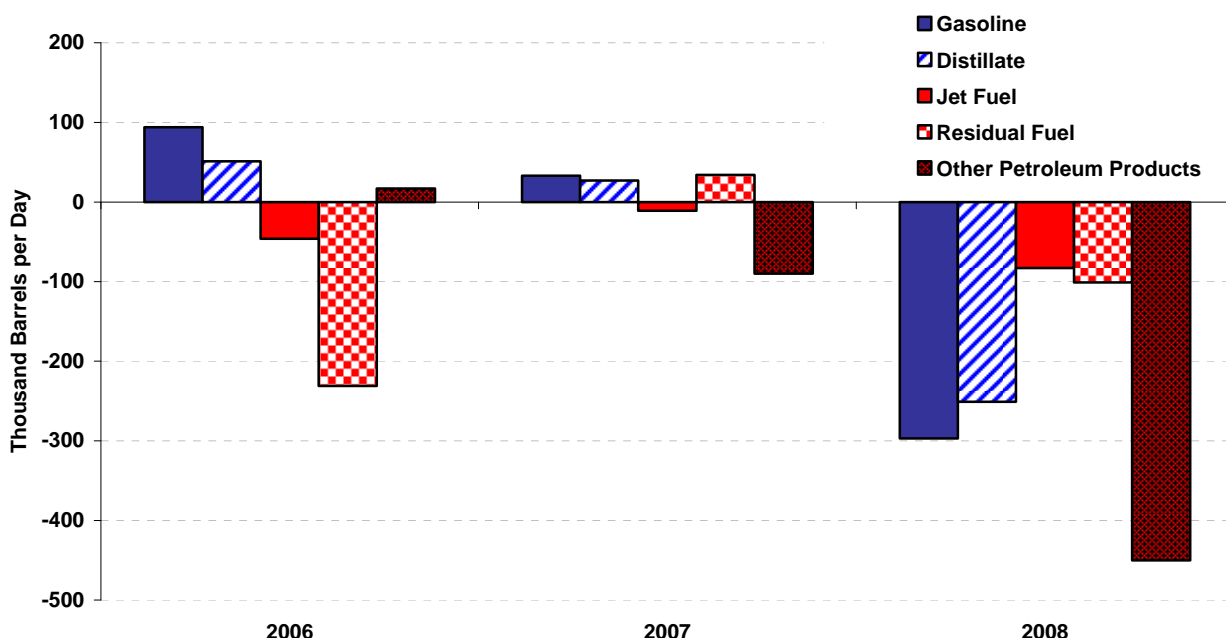
Income Statement Items	Quarterly 2008				Annual	
	Q1	Q2	Q3	Q4	2007	2008
Demand	20.0	19.8	18.9	19.3	20.7	19.5
Crude Oil Production	5.1	5.1	4.7	4.9	5.1	5.0
NGL Production	1.8	1.9	1.7	1.7	1.8	1.8
Other Inputs	1.8	1.8	1.9	1.9	1.6	1.8
Net Imports	11.2	11.3	10.8	11.2	12.0	11.1
Supply from Inventories	0.1	-0.3	-0.2	-0.4	0.1	-0.2

Note: Other Inputs includes adjustments and refinery processing gain.

Source: Calculated from Energy Information Administration, *Monthly Energy Review*, DOE-EIA-0035 (2009/10) (Washington, DC, September 2009), Tables 3.1 and 3.2.

the Securities and Exchange Commission rule currently in place requiring the use of year-end prices for determining reserves. Under rules that will take effect in 2010, an average of first-day-of-the-month prices throughout the year will be used. Had those rules been in place for 2008, there would likely have been a smaller drop (or possibly even an increase) in crude oil proved reserves.

Figure 33. U. S. Petroleum Product Consumption, Change from Previous Year, 2006-2008



Source: Calculated from Energy Information Administration, Petroleum Product Supplied Data, available on the Internet at [http://tonto.eia.doe.gov/dnav/pet/xls/pet\\_cons\\_psup\\_dc\\_nus\\_mbbldpd\\_a.xls](http://tonto.eia.doe.gov/dnav/pet/xls/pet_cons_psup_dc_nus_mbbldpd_a.xls) (as of October 19, 2009).

U.S. refineries increased output in 2008 by 152,000 barrels per day (0.8 percent) from 2007.<sup>91</sup> That increase in output, combined with the decline in petroleum product demand, led to the 7.7-percent drop in net imports of petroleum previously mentioned.

Natural gas demand in the United States increased 0.7 percent in 2008 to 23.2 trillion cubic feet (**Table 22**). Domestic natural gas production increased 7.7 percent in 2008 over 2007, the largest increase since 1984. The jump in natural gas production caused natural gas imports to decrease by 21.4 percent, nearly bringing domestic supply and demand into balance for the year. U.S. natural gas reserve additions more than matched production, with a reserve replacement rate for natural gas of 134 percent.<sup>92</sup> U.S. natural gas reserves increased to their highest level since EIA began reporting them in 1977.

<sup>91</sup> Calculated from Energy Information Administration, U.S. Refinery and Blender Net Production Data, available at [http://tonto.eia.doe.gov/dnav/pet/xls/pet\\_pnp\\_refp\\_dc\\_nus\\_mbbldpd\\_a.xls](http://tonto.eia.doe.gov/dnav/pet/xls/pet_pnp_refp_dc_nus_mbbldpd_a.xls) (as of October 21, 2009).

<sup>92</sup> Reserve additions include revisions and adjustments, net sales and acquisitions, and total discoveries. Energy Information Administration, *Advance Summary: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves 2008 Annual Report* (October 2009), Table 3.

**Table 22. U.S. Natural Gas Balance, 2007-2008**  
(Trillion Cubic Feet)

Income Statement Items	Quarterly 2008				Annual	
	Q1	Q2	Q3	Q4	2007	2008
Demand	7.5	5.0	4.9	5.9	23.0	23.2
Natural Gas Production	5.1	5.1	5.1	5.2	19.1	20.6
Other Inputs	0.0	0.1	0.0	-0.4	0.0	-0.4
Net Imports	0.8	0.7	0.8	0.7	3.8	3.0
Supply from Inventories	1.6	-0.9	-1.0	0.3	0.2	0.0

Note: Other Inputs includes supplemental gaseous fuels and the balancing item.

Source: Energy Information Administration, *Monthly Energy Review*, DOE-EIA-0035 (2009/10)  
(Washington, DC, September 2009), Table 4.1.



## Acronyms

API	American Petroleum Institute
boe	barrels of oil equivalent
Btu	British thermal unit
DD&A	depreciation, depletion, and amortization
DOE	U.S. Department of Energy
E&P	exploration and production
EIA	Energy Information Administration
FAS	Financial Accounting Standard
FRS	Financial Reporting System
FTP	File Transfer Protocol
GDP	gross domestic product
LNG	liquefied natural gas
mcf	thousand cubic feet
mmbd	million barrels per day
mmcf	million cubic feet
MTBE	methyl tertiary butyl ether
NGL	natural gas liquids
OECD	Organization for Economic Cooperation and Development
OPEC	Organization of the Petroleum Exporting Countries
P.L.	Public Law
PP&E	property, plant, and equipment
ROE	return on equity
ROI	return on net investment in place



## Brief Description of Financial Terms

For additional information, see the Glossary, available at [http://www.eia.doe.gov/emeu/perfpro/form/eia28\\_instructions\\_2008.pdf](http://www.eia.doe.gov/emeu/perfpro/form/eia28_instructions_2008.pdf).

**Additions to Investment in Place:** See Capital Expenditure.

**Capital Expenditure:** Also referred to as Additions to Investment in Place. Funds (including cash) used by a company to acquire or upgrade physical assets such as property, industrial buildings, or equipment that are expected to provide benefits for more than just the current year. Additions to property, plant and equipment as well as additions to investments and advances to unconsolidated affiliates are classified as capital expenditures.

**Cash Flow From Operations:** The amount of cash a company generates from operations, defined as net income after taxes plus depreciation and other noncash expenses.

**Current Expenditure:** An expenditure that is expected to provide benefit only in the current year and is classified as an expense in the income statement.

**Development Expenditures:** Costs of developmental wells, facilities and support equipment used to access and prepare oil and gas deposits for production.

**Exploration Expenditures:** Costs of locating oil and gas deposits, including the costs of retaining and carrying undeveloped property, geological and geophysical costs, and the costs of drilling and equipping exploratory wells.

**Extensions and Discoveries:** Reserve additions (see below) that result from the extension of previously discovered reservoirs or the discovery of new fields or reservoirs.

**Finding Costs:** The per-barrel costs of adding oil or gas proved reserves.

**Gross Refining Margin:** The difference between the revenue from the sale of petroleum products (e.g., motor gasoline) and the cost of the raw materials (e.g., crude oil) used to produce the products.

**Improved Recovery:** Reserve additions (see below) resulting from the application of improved recovery techniques.

**Lifting (Production) Costs:** See Production Costs.

**Lines of Business:** The FRS lines of business consist of petroleum, downstream natural gas (including NGL processing and natural gas pipelines), electric power, nonenergy, and other energy (including coal, nuclear, renewable fuels, and nonconventional fuels). The petroleum line of business is further segmented into production (including oil and natural gas exploration, development, and production), refining/marketing, crude and petroleum product pipelines (for domestic petroleum), and international marine transport (for foreign petroleum).

**Net Income:** A company's total earnings, or profit. Net income is calculated by taking revenues less the cost of doing business, depreciation, interest, taxes and other expenses. This number is an important measure of how profitable the company is over a period of time.<sup>93</sup>

**Net Investment In Place:** The value of property, plant, and equipment net of depreciation, plus investments and advances to unconsolidated affiliates.

**Net Refining Margin:** The difference between the gross refining margin and the costs of producing and selling the petroleum products (e.g., refining energy costs and selling costs). The net margin measures before-tax cash earnings from the production and sale of refined products. The net margin excludes peripheral activities such as non-petroleum product sales at convenience stores.

**Production (Lifting) Costs:** The per-barrel costs associated with the extraction of a mineral reserve from a producing property.

**Production Expenditures:** The costs of extracting oil and gas from oil and gas deposits.

**Profitability:** The measure of a company's or an industry's net income relative to the equity or capital provided by its investors. Profitability for the consolidated FRS companies can be measured by return on equity (ROE). Because stockholders' equity is a corporate concept, the lines of business within the company use return on investment (ROI) as a measure of profitability. Net investment in place consists of the value of property, plant, and equipment net of depreciation, plus investments and advances to unconsolidated affiliates.

**Return on Equity (ROE):** Net income as a percentage of shareholders' equity. ROE measures performance (i.e., net income) relative to the value of stockholders' equity (retained earnings plus other equity) in the company.

**Return on Investment (ROI):** Net income divided by net investment in place for that segment. ROI measures performance relative to the value of investments by the company in property, plant and equipment (PP&E) (long-term capital assets) for a particular business segment or project.

**Regions:** The FRS regions consist of U.S. Onshore, U.S. Offshore, Canada, Europe, Former Soviet Union, Africa, Middle East, Other Eastern Hemisphere (primarily Asia Pacific), and Other Western Hemisphere (primarily South America).

**Reserve Additions:** The quantity of oil and gas reserves added each year as a result of exploration and development activities. Reserve additions are reported in three categories: reserve revisions, improved recovery, and extensions and discoveries.

**Reserve Replacement Ratio:** The amount of oil and gas reserves added in a year divided by the amount of oil and gas produced during that same year.

**Reserve Revisions:** Changes (upward or downward) made to previous estimates as a result of new information obtained from development drilling and production history or from changes in economic factors.

**Reserves-to-Production Ratio:** The number of years that oil and gas reserves would last at the current production rate.

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<sup>93</sup> See the dictionary on Investopedia.com for additional information. Investopedia.com can be found at <http://www.investopedia.com> (as of October 6, 2009).

**Special Items:** Accounting changes, asset dispositions and write-downs, tax adjustments, and related items that affect net income but are not part of normal operations. Special items are items that are similar to, but do not necessarily qualify as, extraordinary or unusual items under U.S. generally accepted accounting principles. Excluding special items (which to great extent are not reoccurring) from annual net income is a standard practice to attempt to give a clearer picture of a company's ongoing operations for any particular year.



## Detailed Statistical Tables

**Table T1. Selected Financial Items, 2002-2008**  
(Billion 2008 Dollars)

	2002	2003	2004	2005	2006	2007	2008
<b>Income Statement</b>							
Operating Revenues	823.0	966.9	1,188.5	1,447.3	1,459.0	1,475.0	1,818.1
Operating Expenses	776.9	872.9	1,051.1	1,263.8	1,255.0	1,297.7	1,654.0
Operating Income	46.2	94.0	137.4	183.5	204.0	177.3	164.1
Interest Expense	12.7	10.1	12.4	11.6	12.4	11.1	11.4
Other Income <sup>1</sup>	7.9	19.5	20.1	34.6	41.2	47.5	32.6
Income Taxes	17.2	37.2	54.2	77.1	94.8	86.3	98.5
Net Income	24.3	66.2	90.9	129.3	138.0	127.4	86.9

<sup>1</sup>"Other Income" includes other revenue and expense (excluding interest expense), discontinued operations, extraordinary items, and accounting changes.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T2. Consolidated Statement of Income by Line of Business, 2008**  
(Million 2008 Dollars)

Income Statement Items	Consol- idated	Petroleum	Other Energy	Downstream Natural Gas	Electric Power	Non- energy
<b>Operating Revenues</b>	1,818,059	1,628,626	6,138	321,410	26,205	111,625
<b>Operating Expenses</b>						
General Operating Expenses	1,541,615	1,368,142	5,476	318,487	11,842	110,082
Depreciation, Depletion, & Allowance	96,034	87,887	393	3,347	199	3,444
General & Administrative	16,304	8,381	225	2,191	321	3,097
Total Operating Expenses	1,653,953	1,464,410	6,094	324,025	12,362	116,623
<b>Operating Income</b>	164,106	164,216	44	-2,615	13,843	-4,998
<b>Other Revenue &amp; (Expense)</b>						
Earnings of Unconsolidated Affiliates	20,662	12,798	W	5,998	W	2,063
Other Dividend & Interest Income	5,030	-	-	-	-	-
Gain/Loss on Disposition of Property, Plant, & Equipment	7,581	7,186	W	353	W	-4
Interest Expenses & Financial Charges	-11,378	-	-	-	-	-
Minority Interest in Income	-3,679	-	-	-	-	-
Foreign Currency Translation Effects	657	-	-	-	-	-
Other Revenue & (Expense)	1,278	-	-	-	-	-
<b>Total Other Revenue &amp; (Expense)</b>	20,151	19,984	-24	6,351	370	2,059
<b>Pretax Income</b>	184,257	184,200	20	3,736	14,213	-2,939
<b>Income Tax Expense</b>	98,456	98,469	344	181	4,892	-578
<b>Discontinued Operations</b>	1,111	W	0	W	W	0
<b>Extraordinary Items and Cumulative Effect of Accounting Changes</b>	0	W	0	W	W	0
<b>Net Income</b>	86,912	86,743	-324	3,549	9,311	-2,361

- = Not reported.

W = Data withheld to avoid disclosure.

Note: Sum of components may not equal total due to independent rounding, eliminations, and nontraceables.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T3. Consolidated Balance Sheet and Financial Ratios, 2002-2008**

Balance Sheet Items	2002	2003	2004	2005	2006	2007	2008
<b>Assets</b>							
Current Assets:	(billion 2008 dollars)						
Cash & Marketable Securities	22.9	31.1	62.3	75.8	66.0	62.9	59.4
Trade Accounts & Notes Receivable	92.7	97.8	125.6	133.4	134.0	149.9	105.2
Inventories:							
Raw Materials & Products	27.3	30.8	33.0	36.2	40.2	40.5	41.0
Materials & Supplies	8.9	6.5	6.9	7.4	8.5	8.6	9.5
Other Current Assets	32.2	23.8	28.3	69.3	57.7	47.4	73.9
Total Current Assets	184.1	190.1	256.2	322.1	306.5	309.3	288.9
Non-current Assets:							
Property, Plant & Equipment (PP&E)							
Gross PP&E	973.1	998.8	1,072.8	1,087.5	1,175.3	1,237.5	1,340.6
Accumulated Depreciation, Depletion, and Amortization (DD&A)	447.1	456.8	498.6	488.8	493.0	525.6	572.2
Net PP&E	526.0	542.0	574.2	598.7	682.3	711.9	768.5
Investments & Advances to Unconsolidated Affiliates	63.4	62.8	73.3	81.2	89.1	105.3	106.3
Other Non-current Assets	136.2	114.1	125.7	134.7	141.5	140.3	94.0
Total Non-current Assets	725.7	718.9	773.2	814.6	912.9	957.5	968.7
<b>Total Assets</b>	<b>909.8</b>	<b>909.0</b>	<b>1,029.4</b>	<b>1,136.7</b>	<b>1,219.4</b>	<b>1,266.8</b>	<b>1,257.6</b>
<b>Liabilities &amp; Stockholders' Equity</b>							
Liabilities							
Current Liabilities							
Trade Accounts & Notes Payable	108.2	101.7	125.2	146.2	155.5	171.0	152.4
Other Current Liabilities	76.4	72.0	88.7	131.4	129.3	107.8	114.2
Long-Term Debt	181.4	171.7	186.4	171.4	177.9	179.0	191.0
Deferred Income Tax Credits	89.6	95.9	105.6	110.0	128.0	125.4	112.2
Other Deferred Credits	32.8	32.8	34.6	36.7	34.2	36.2	43.4
Other Long-Term Items	61.4	57.3	63.5	71.4	73.5	84.5	100.5
Minority Interest in Consolidated Affiliates	12.9	12.0	13.8	10.6	11.3	11.7	11.4
Total Liabilities	562.7	543.4	617.6	677.6	709.8	715.6	725.1
Stockholders' Equity:							
Retained Earnings	242.7	252.1	294.8	363.1	435.1	521.1	567.1
Other Equity	104.4	113.5	117.1	96.0	74.4	30.1	-34.6
Total Stockholders' Equity	347.1	365.5	411.8	459.1	509.6	551.2	532.5
<b>Total Liabilities &amp; Stockholders' Equity</b>	<b>909.8</b>	<b>909.0</b>	<b>1,029.4</b>	<b>1,136.7</b>	<b>1,219.4</b>	<b>1,266.8</b>	<b>1,257.6</b>
<b>Financial Ratios</b>							
	(percent)						
Net Income/Stockholders' Equity (ROE)	7.0	18.1	22.1	28.2	27.1	23.1	16.3
Net Income plus Interest/Total Invested Capital (ROC)	7.0	14.2	17.3	22.3	21.9	19.0	13.6
Long-term Debt/Stockholders' Equity (D/E)	52.3	47.0	45.3	37.3	34.9	32.5	35.9
<b>Memo:</b>							
Foreign Currency Translation Adjustment	(billion 2008 dollars)						
Cumulative at Year End	-2.39	3.21	8.92	5.43	7.65	17.06	-0.01
Foreign Currency Translation Adjustment for the Current Year	3.69	8.27	4.84	-3.25	4.00	8.49	-16.72
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).							



**Table T4. Consolidated Statement of Cash Flows, 2002-2008**  
(Million 2008 Dollars)

Cash Flows <sup>1</sup>	2002	2003	2004	2005	2006	2007	2008
<b>Cash Flows From Operations</b>							
Net Income	24,250	66,204	90,900	129,331	138,023	127,436	86,912
Minority Interest in Income	1,258	1,982	2,360	3,023	2,247	2,298	3,679
Noncash Items:							
Depreciation, Depletion, & Allowance	53,618	50,557	52,889	53,301	59,500	65,126	96,034
Dry Hole Expense, This Year	2,267	1,923	2,187	1,906	3,348	2,585	2,520
Deferred Income Taxes	-168	6,955	4,483	4,575	9,344	1,871	2,780
Recognized Undistributed (Earnings)/Losses of Unconsolidated Affiliates	1,347	-1,647	-5,104	-5,841	-4,041	-5,721	-1,099
(Gain)/Loss on Disposition of Property, Plant, & Equipment (PP&E)	-1,618	-2,200	-1,995	-5,114	-5,784	-13,302	-7,581
Changes in Operating Assets and Liabilities and Other Noncash Items	-749	-762	7,539	2,905	-9,396	6,371	30,829
Other Cash Items, Net	8,063	-1,827	-975	199	10,883	8,401	5,838
Net Cash Flow From Operations	88,268	121,184	152,283	184,285	204,125	195,065	219,912
<b>Cash Flows From Investing Activities</b>							
Additions to PP&E:							
Due to Mergers and Acquisitions	-40,246	-13,104	-11,347	-40,594	-83,753	-22,225	-37,066
Other	-67,327	-74,997	-78,209	-91,385	-109,939	-125,707	-147,400
Total Additions to PP&E	-107,573	-88,101	-89,556	-131,979	-193,692	-147,931	-184,466
Additions to Investments and Advances	-8,867	-4,083	-6,928	-12,436	-10,543	-20,164	-14,287
Proceeds From Disposals of PP&E	17,884	18,575	22,073	38,912	43,747	34,077	25,365
Other Investment Activities, Net	34,826	5,271	4,924	25,088	-22,224	28,069	12,261
Cash Flow From Investing Activities	-63,730	-68,339	-69,488	-80,416	-182,712	-105,949	-161,127
<b>Cash Flows From Financing Activities</b>							
Proceeds From Long-Term Debt	40,151	30,380	20,775	32,151	86,004	74,342	75,673
Proceeds From Equity Security Offerings	5,745	9,680	9,109	11,355	23,751	2,146	7,323
Reductions in Long-Term Debt	-32,813	-30,230	-20,640	-36,114	-52,543	-64,557	-57,712
Purchase of Treasury Stock	-5,511	-6,985	-15,707	-34,497	-43,851	-55,306	-55,592
Dividends to Shareholders	-20,896	-49,351	-40,963	-43,099	-40,469	-34,037	-31,479
Other Financing Activities, Including Net Change in Short-Term Debt	-8,318	2,877	-12,569	-17,061	-2,732	-9,192	3,245
Cash Flow From Financing Activities	-21,643	-43,628	-59,995	-87,265	-29,839	-86,605	-58,542
<b>Effect of Exchange Rate on Cash</b>	672	941	974	-969	1,043	2,604	-3,148
<b>Net Increase/(Decrease) in Cash and Cash Equivalents</b>	3,567	10,158	23,775	15,634	-7,383	5,116	-2,905

<sup>1</sup> Items that add to cash are positive, and items that use cash are shown as negative values.

Note: Beginning with the 1988 reporting year, the Financial Accounting Standards Board required adoption of the Statement of Cash Flows to replace the sources and uses of funds format and most companies restated their results for 1986 and 1987 in the new format.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T5. Consolidated Statement of Income for FRS Companies, U.S. and Foreign Petroleum Segments, 2008**  
(Million 2008 Dollars)

Income Statement Items	U.S. Petroleum				Foreign Petroleum		
	Consolidated	Production	Refining/Marketing	Pipelines <sup>1</sup>	Consolidated	Production	Refining/Marketing & Int'l Marine <sup>2</sup>
<b>Operating Revenues</b>							
Raw Material Sales	237,024	153,633	156,602	W	263,185	204,758	217,081
Refined Products Sales	812,735	W	812,149	0	359,119	0	361,538
Transportation Revenues	925	W	619	W	5,021	W	9,618
Management and Processing Fees	4,015	629	3,951	64	2,070	W	2,363
Other	20,542	4,379	16,718	1,016	4,448	1,185	3,405
<b>Total Operating Revenues</b>	<b>1,075,241</b>	<b>158,718</b>	<b>990,039</b>	<b>13,948</b>	<b>633,843</b>	<b>206,065</b>	<b>594,005</b>
<b>Operating Expenses</b>							
General Operating Expenses	960,928	63,762	971,171	13,459	487,672	77,935	575,964
Depreciation, Depletion, & Allowance	51,831	42,387	9,056	388	36,056	33,559	2,497
General & Administrative	6,428	2,972	3,325	131	1,953	1,369	584
<b>Total Operating Expenses</b>	<b>1,019,187</b>	<b>109,121</b>	<b>983,552</b>	<b>13,978</b>	<b>525,681</b>	<b>112,863</b>	<b>579,045</b>
<b>Operating Income</b>	<b>56,054</b>	<b>49,597</b>	<b>6,487</b>	<b>-30</b>	<b>108,162</b>	<b>93,202</b>	<b>14,960</b>
<b>Other Revenue &amp; (Expense)</b>							
Earnings of Unconsolidated Affiliates	5,707	4,146	1,391	170	7,091	5,211	1,880
Gain/(Loss) on Disposition of Property, Plant, & Equipment	3,585	2,247	1,185	153	3,601	2,207	1,394
<b>Total Other Revenue &amp; (Expense)</b>	<b>9,292</b>	<b>6,393</b>	<b>2,576</b>	<b>323</b>	<b>10,692</b>	<b>7,418</b>	<b>3,274</b>
<b>Pretax Income</b>	<b>65,346</b>	<b>55,990</b>	<b>9,063</b>	<b>293</b>	<b>118,854</b>	<b>100,620</b>	<b>18,234</b>
<b>Income Tax Expense</b>	<b>29,470</b>	<b>23,691</b>	<b>5,724</b>	<b>55</b>	<b>68,999</b>	<b>61,865</b>	<b>7,134</b>
<b>Discontinued Operations</b>	<b>W</b>	<b>W</b>	<b>0</b>	<b>0</b>	<b>1,013</b>	<b>1,013</b>	<b>0</b>
<b>Extraordinary Items and Cumulative Effect of Accounting Changes</b>	<b>W</b>	<b>W</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Contribution To Net Income</b>	<b>35,875</b>	<b>32,298</b>	<b>3,339</b>	<b>238</b>	<b>50,868</b>	<b>39,768</b>	<b>11,100</b>

<sup>1</sup>Beginning in 2003, natural gas and natural gas liquids pipelines are part of the downstream natural gas line of business. See Table T6.

<sup>2</sup>Foreign Refining/Marketing and International Marine are combined to avoid disclosure.

W= Data withheld to avoid disclosure.

Note: Sum of components may not equal total due to independent rounding and eliminations.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T6. Consolidated Statement of Income for U.S. and Foreign Downstream Natural Gas Segments, 2008**  
(Million 2008 Dollars)

Income Statement Items	U.S. Downstream Natural Gas					Consolidated Foreign
	Consolidated	Processing	Marketing/ Trading	Transmission	Distribution	
<b>Operating Revenues</b>						
Natural Gas Sales	190,156	W	183,265	-	W	74,307
LNG Products Sales	W	W	0	-	0	4,503
NGL Products Sales	29,339	17,116	18,846	-	0	13,154
Transportation Sales	4,701	301	143	4,328	(1)	W
Other Product Sales	W	W	0	37	(1)	0
Trading/Derivatives	287	-	287	-	-	-225
Management and Processing Fees	2,079	901	1,148	W	(1)	W
Other Revenues	5,153	1,393	3,359	401	(1)	786
<b>Total Operating Revenues</b>	<b>231,965</b>	<b>53,179</b>	<b>207,048</b>	<b>5,498</b>	<b>(1)</b>	<b>93,135</b>
<b>Operating Expenses</b>						
General Operating Expenses	235,153	52,156	214,533	2,224	(1)	87,024
Depreciation, Depletion, & Allowance	1,949	W	W	824	(1)	1,398
General & Administrative	1,893	W	W	745	(1)	298
<b>Total Operating Expenses</b>	<b>238,995</b>	<b>53,340</b>	<b>215,622</b>	<b>3,793</b>	<b>(1)</b>	<b>88,720</b>
<b>Operating Income</b>	<b>-7,030</b>	<b>-161</b>	<b>-8,574</b>	<b>1,705</b>	<b>(1)</b>	<b>4,415</b>
<b>Other Revenue &amp; (Expense)</b>						
Earnings of Unconsolidated Affiliates	W	W	19	146	(1)	W
Gain/(Loss) on Disposition of Property, Plant, & Equipment	W	W	93	19	(1)	W
<b>Total Other Revenue &amp; (Expense)</b>	<b>1,058</b>	<b>781</b>	<b>112</b>	<b>165</b>	<b>(1)</b>	<b>5,293</b>
<b>Pretax Income</b>	<b>-5,972</b>	<b>620</b>	<b>-8,462</b>	<b>1,870</b>	<b>(1)</b>	<b>9,708</b>
<b>Income Tax Expense</b>	<b>-2,129</b>	<b>221</b>	<b>-3,043</b>	<b>693</b>	<b>(1)</b>	<b>2,310</b>
<b>Discontinued Operations</b>	<b>-6</b>	<b>-6</b>	<b>0</b>	<b>0</b>	<b>(1)</b>	<b>W</b>
<b>Extraordinary Items and Cumulative Effect of Accounting Changes</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>(1)</b>	<b>W</b>
<b>Contribution To Net Income</b>	<b>-3,849</b>	<b>393</b>	<b>-5,419</b>	<b>1,177</b>	<b>(1)</b>	<b>7,398</b>

- = Not reported.

<sup>1</sup>Distribution is combined with Transmission to avoid disclosure.

W = Data withheld to avoid disclosure.

Note: Sum of components may not equal total due to independent rounding and eliminations.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T7. Consolidated Statement of Income for U.S. and Foreign Electric Power Segments, 2008**  
(Million 2008 Dollars)

Income Statement Items	U.S. Electric Power			Consolidated Foreign
	Consolidated	Generation	Marketing/ Trading	
<b>Operating Revenues</b>				
Power Sales	22,976	774	22,414	3,149
Transportation Sales	0	-	0	0
Other Product Sales	W	-	W	0
Trading/Derivatives	W	-	W	0
Other Revenues	305	305	0	166
Total Operating Revenues	23,286	1,079	22,419	3,315
<b>Operating Expenses</b>				
General Operating Expenses	9,301	1,132	8,381	2,937
Depreciation, Depletion, & Allowance	85	43	W	114
General & Administrative	289	138	W	32
Total Operating Expenses	9,675	1,313	8,574	3,083
<b>Operating Income</b>	13,611	-234	13,845	232
<b>Other Revenue &amp; (Expense)</b>				
Earnings of Unconsolidated Affiliates	W	W	W	344
Gain/(Loss) on Disposition of Property, Plant, & Equipment	3	3	0	W
<b>Income Tax Expense</b>	4,777	-77	4,854	115
<b>Contribution To Net Income</b>	8,863	-138	9,001	448

- = Not reported.

W = Data withheld to avoid disclosure.

Note: Sum of components may not equal total due to independent rounding and eliminations.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T8. Net PP&E, Additions to PP&E, Investments and Advances, and DD&A,  
by Lines of Business, 2008  
(Million 2008 Dollars)**

	Year End Balance		Activity During Year		
	Net PP&E	Investments & Advances to Unconsolidated Affiliates	Additions to PP&E	Additions to Investments & Advances to Unconsolidated Affiliates	DD&A
<b>Petroleum</b>					
United States					
Production	294,645	8,225	88,596	742	42,387
Refining/Marketing					
Refining	96,102	10,600	19,797	471	5,627
Marketing	14,430	639	4,573	W	3,221
Refining/Marketing Transport					
Pipelines	1,865	913	298	93	108
Marine	1,137	W	44	W	74
Other	1,173	W	576	W	26
Total U.S. Refining/Marketing	114,707	12,152	25,288	580	9,056
Rate Regulated Pipelines					
Refined Products	3,834	547	316	123	175
Crude Oil and Liquids	4,218	1,261	422	345	213
Total Rate Regulated Pipelines	8,052	1,808	738	W	388
Total U.S. Petroleum	417,404	22,185	114,622	1,790	51,831
Foreign					
Production	198,276	45,492	45,076	3,964	33,559
Refining/Marketing & International Marine <sup>1</sup>	30,634	11,560	2,622	1,712	2,497
Total Foreign Petroleum	228,910	57,052	47,698	5,676	36,056
<b>Total Petroleum</b>	<b>646,314</b>	<b>79,237</b>	<b>162,320</b>	<b>7,466</b>	<b>87,887</b>
<b>Downstream Natural Gas</b>					
United States					
Processing:					
NGL Production	W	1,109	W	W	W
Other Processing	11,099	W	3,997	0	701
LNG Import/Export Facilities	W	W	W	W	W
Total Processing	15,282	1,418	4,720	W	W
Marketing/Trading	W	W	W	W	W
Transmission:					
Pipelines	17,502	1,676	1,707	170	684
Storage	726	W	80	W	23
Other	2,764	W	70	W	95
Total Transmission	20,992	1,910	1,857	465	802
Total Distribution	W	W	W	0	W
Total U.S. Downstream Natural Gas	39,422	3,375	6,813	769	1,949
Total Foreign Downstream Natural Gas	18,417	8,509	4,780	4,835	1,398
<b>Total Downstream Natural Gas</b>	<b>57,839</b>	<b>11,884</b>	<b>11,593</b>	<b>5,604</b>	<b>3,347</b>

<sup>1</sup>Foreign Refining/Marketing and International Marine combined to avoid disclosure.

W = Data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Table is continued on the following page.

**Table T8. Net PP&E, Additions to PP&E, Investments and Advances, and DD&A,  
by Lines of Business, 2008  
(Million 2008 Dollars) (Continued)**

	Year End Balance		Activity During Year		
	Net PP&E	Investments & Advances to Unconsolidated Affiliates	Additions to PP&E	Additions to Investments & Advances to Unconsolidated Affiliates	DD&A
<b>Electric Power</b>					
United States:					
Generation	463	777	W	0	43
Marketing/Trading	0	0	0	0	W
Transmission	0	0	0	0	0
Distribution	0	0	0	0	W
Total U.S. Electric Power	463	777	W	0	85
Total Foreign Electric Power	1,954	1,940	W	W	114
<b>Total Electric Power</b>	<b>2,417</b>	<b>2,717</b>	<b>261</b>	<b>W</b>	<b>199</b>
<b>Other Energy</b>					
U.S. Nonconventional Oil	1,411	818	455	540	54
Other U.S.	1,149	130	W	W	W
<b>Total Worldwide Other Energy</b>	<b>14,332</b>	<b>958</b>	<b>2,596</b>	<b>566</b>	<b>393</b>
<b>Nonenergy</b>					
Foreign Chemicals	9,787	2,857	2,233	W	592
U.S. Chemicals	20,592	6,977	1,656	112	2,584
Foreign Other Nonenergy	93	W	W	0	W
U.S. Other Nonenergy	2,889	W	W	W	W
<b>Total Nonenergy</b>	<b>33,361</b>	<b>11,413</b>	<b>4,528</b>	<b>383</b>	<b>3,444</b>
<b>Nontraceable</b>	<b>14,197</b>	<b>66</b>	<b>3,168</b>	<b>W</b>	<b>764</b>
<b>Consolidated</b>	<b>768,460</b>	<b>106,275</b>	<b>184,466</b>	<b>14,287</b>	<b>96,034</b>

W = Data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T9. Return on Investment by Lines of Business, Ranked by Total Energy Assets, 2007-2008  
(Percent)**

Line of Business	All FRS		Top Four		Five through Twelve		All Other	
	2007	2008	2007	2008	2007	2008	2007	2008
<b>Petroleum</b>	17.8	12.0	18.5	14.5	18.0	11.6	15.3	4.3
U.S. Petroleum	16.7	8.2	17.7	10.0	17.3	9.3	14.5	3.3
Oil and Natural Gas Production	15.2	10.7	19.2	10.7	14.3	12.8	11.2	5.8
Refining/Marketing	21.6	2.6	16.6	10.1	25.9	-2.8	23.9	-0.6
Pipelines	2.9	2.4	2.4	-2.6	1.4	W	6.9	W
Foreign Petroleum	19.2	17.8	19.0	17.6	20.6	24.4	19.0	9.3
Oil and Natural Gas Production	18.8	16.3	18.7	16.0	19.7	25.9	18.8	5.5
Refining/Marketing	21.8	26.3	20.9	25.7	30.5	8.3	406.7	3,377.3
International Marine	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
<b>Downstream Natural Gas<sup>1</sup></b>	<b>15.6</b>	<b>5.1</b>	<b>19.6</b>	<b>40.2</b>	<b>19.7</b>	<b>-53.3</b>	<b>4.6</b>	<b>6.6</b>
<b>Electric Power<sup>1</sup></b>	<b>-32.5</b>	<b>181.4</b>	<b>14.6</b>	<b>11.4</b>	<b>-533.5</b>	<b>W</b>	<b>52.4</b>	<b>-0.6</b>
<b>Other Energy</b>	<b>6.0</b>	<b>-2.1</b>	<b>23.0</b>	<b>17.1</b>	<b>-5.1</b>	<b>-15.5</b>	<b>4.9</b>	<b>W</b>
<b>Nonenergy</b>	<b>12.5</b>	<b>-5.3</b>	<b>17.9</b>	<b>8.3</b>	<b>3.0</b>	<b>-1.9</b>	<b>7.4</b>	<b>-41.2</b>

<sup>1</sup>The downstream natural gas and electric power lines of business were added to the EIA-28 survey form beginning with the 2003 reporting year.

<sup>2</sup>International Marine is combined with Refining/Marketing to avoid disclosure.

W = Data withheld to avoid disclosure.

Note: Return on investment measured as contribution to net income/net investment in place.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T10. Size Distribution of Net Investment in Place  
Ranked by Total Energy Assets, 2008  
(Percent)**

Line of Business	Top Four	Five through Twelve	All Other	All FRS
<b>Petroleum</b>	54.7	28.6	16.7	100.0
United States	36.8	40.0	23.2	100.0
Production	35.9	44.6	19.5	100.0
Refining/Marketing	36.6	30.5	32.9	100.0
Refining	33.6	31.9	34.5	100.0
Marketing	53.8	21.3	24.9	100.0
Rate Regulated Pipelines	66.4	21.7	11.9	100.0
Foreign	82.3	11.0	6.8	100.0
Production	80.3	11.8	7.9	100.0
Refining/Marketing	93.4	6.5	0.1	100.0
International Marine	100.0	0.0	0.0	100.0
<b>Downstream Natural Gas</b>	34.8	22.1	43.1	100.0
U.S. Downstream Natural Gas	9.6	22.9	67.5	100.0
Processing	18.1	47.2	34.6	100.0
Marketing/Trading	24.8	73.3	1.8	100.0
Transmission	1.9	0.1	97.9	100.0
Distribution	0.0	4.0	96.0	100.0
Foreign Downstream Natural Gas	75.0	20.8	4.2	100.0
<b>Electric Power</b>	87.4	6.3	6.4	100.0
U.S. Electric Power	73.7	25.9	0.4	100.0
Generation	73.7	25.9	0.4	100.0
Marketing/Trading	0.0	0.0	0.0	NM
Transmission	0.0	0.0	0.0	NM
Distribution	0.0	0.0	0.0	NM
Foreign Electric Power	91.7	0.0	8.3	100.0
<b>Other Energy</b>	35.9	58.4	5.8	100.0
<b>Nonenergy</b>	54.8	22.3	22.9	100.0
Chemicals	55.5	19.4	25.0	100.0
Other Nonenergy	48.6	47.5	3.9	100.0
<b>Consolidated</b>	53.2	28.1	18.7	100.0

Note: Sum of components may not equal total due to independent rounding, eliminations, and nontraceables.

NM = Not meaningful.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T11. Research and Development Expenditures, 2002-2008**  
(Million 2008 Dollars)

	2002	2003	2004	2005	2006	2007	2008
<b>Sources of R&amp;D Funds</b>							
Federal Government	W	W	13.5	W	W	W	W
Internal Company	2,051.5	1,755.8	1,690.1	1,864.8	2,161.1	2,598.4	2,805.0
Other Sources	W	W	28.0	W	W	W	W
<b>Total Sources</b>	<b>2,064.4</b>	<b>1,768.5</b>	<b>1,731.5</b>	<b>1,891.9</b>	<b>2,271.4</b>	<b>2,679.0</b>	<b>2,893.0</b>
<b>Breakdown of R&amp;D Expenditures</b>							
Oil & Natural Gas Recovery	546.4	426.6	568.4	669.3	834.2	932.5	1,282.0
Gas to Liquids	0.0	59.9	42.6	92.2	W	73.5	95.0
Other Petroleum	772.5	411.6	299.3	345.0	408.7	533.2	448.0
Coal Gasification/Liquefaction	W	W	W	W	W	W	37.0
Other Coal	W	0.0	0.0	0.0	0.0	0.0	0.0
Downstream Natural Gas	-	8.1	0.0	0.0	W	0.0	W
Wind Generation	-	0.0	0.0	0.0	0.0	W	0.0
Solar Generation	-	4.6	W	W	W	W	W
Distributed Generation	-	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cells	-	8.1	11.2	W	W	W	W
Other Nonconventional Energy	W	62.3	126.7	215.9	416.0	418.8	309.0
Nonenergy	608.8	779.3	678.9	546.8	523.2	641.4	576.0
Unassigned	W	W	W	W	W	W	W
<b>Total Expenditures</b>	<b>2,064.4</b>	<b>1,768.5</b>	<b>1,731.5</b>	<b>1,891.9</b>	<b>2,271.4</b>	<b>2,679.0</b>	<b>2,893.0</b>

- = Not reported.

W = Data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).



**Table T12. Income Taxes, 2002-2+A41008**  
(Million 2008 Dollars)

	2002	2003	2004	2005	2006	2007	2008
<b>Income Taxes (as per Financial Statements)</b>							
Current Paid or Accrued:							
U.S. Federal, before Investment Tax Credit & Alternative Minimum Tax	459	8,665	18,101	26,912	26,486	25,220	20,303
U.S. Federal Investment Tax Credit	-289	-272	-225	-350	-133	-51	-198
Effect of Alternative Minimum Tax	81	-380	-515	-331	-153	89	34
U.S. State & Local Income Taxes	563	1,261	2,300	3,762	3,269	3,074	3,060
Foreign Income Taxes							
Canada	1,456	1,807	2,669	3,719	3,267	3,110	3,733
Europe <sup>1</sup>	6,567	7,724	12,412	16,628	20,164	16,625	22,466
Former Soviet Union <sup>2</sup>	51	182	142	511	1,093	1,831	2,419
Africa	3,396	4,440	6,823	10,495	17,248	17,262	21,766
Middle East	2,064	2,438	2,998	4,233	6,380	8,940	11,769
Other Eastern Hemisphere	1,971	3,185	3,382	3,784	5,669	5,847	7,349
Other Western Hemisphere	788	1,299	2,097	3,233	2,318	2,171	2,889
Total Foreign	16,293	21,075	30,523	42,602	56,139	55,787	72,391
Total Current	17,108	30,349	50,185	72,595	85,607	84,119	95,590
Deferred							
U.S. Federal, before Investment Tax Credit	284	5,499	2,491	1,660	6,919	2,580	2,984
U.S. Federal Investment Tax Credit	-21	-20	-19	-18	-15	1	0
Effect of Alternative Minimum Tax	-81	386	499	329	170	-46	-33
U.S. State & Local Income Taxes	90	357	104	108	961	73	81
Foreign	-225	656	950	2,451	1,190	-420	-166
Total Deferred	46	6,879	4,024	4,529	9,226	2,188	2,866
<b>Total Income Tax Expense</b>	<b>17,154</b>	<b>37,228</b>	<b>54,209</b>	<b>77,125</b>	<b>94,834</b>	<b>86,306</b>	<b>98,456</b>
<b>Reconciliation of Accrued U.S. Federal Income Tax Expense To Statutory Rate</b>							
Consolidated Pretax Income/(Loss)	42,597	103,205	144,577	203,873	230,509	211,876	184,257
Less: Foreign Source Income not Subject to U.S. Tax	10,382	20,541	32,100	41,702	30,979	27,754	26,898
Equals: Income Subject to U.S. Tax	32,215	82,663	112,477	162,171	199,530	184,123	157,359
Less: U.S. State & Local Income Taxes	406	1,101	2,345	3,888	4,181	2,950	2,997
Less: Applicable Foreign Income Taxes Deducted	297	363	370	622	1,700	1,207	1,489
Equals: Pretax Income Subject to U.S. Tax	31,512	81,199	109,762	157,662	193,649	179,966	152,873
Tax Provision Based on Previous Line	11,026	28,426	38,051	55,159	67,744	62,974	56,235
Increase/(Decrease) in Taxes Due To:							
Foreign Tax Credits Recognized	-8,577	-13,125	-16,418	-24,581	-32,581	-34,063	-43,072
U.S. Federal Investment Tax Credit Recognized	-289	-296	-268	-453	-353	-135	W
Statutory Depletion	-4	-7	-7	-11	-11	-37	-18
Effect of Alternative Minimum Tax	0	0	-15	0	5	26	W
Other	-1,722	-1,110	-1,007	-1,904	-1,534	-973	10,161
<b>Actual U.S. Federal Tax Provision (Refund)</b>	<b>436</b>	<b>13,887</b>	<b>20,336</b>	<b>28,210</b>	<b>33,270</b>	<b>27,792</b>	<b>23,110</b>

<sup>1</sup> Prior to 2006, this region comprised of European member countries of the OECD.

<sup>2</sup> Prior to 2006, this region comprised of the Former Soviet Union and East Europe.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T13. U.S. Taxes Other Than Income Taxes, 2002-2008**  
(Million 2008 Dollars)

	2002	2003	2004	2005	2006	2007	2008
<b>Production Taxes</b>							
Oil and Natural Gas Production	2,576	3,605	3,952	5,295	5,903	7,475	12,475
Other Energy	41	W	38	36	W	W	W
Other <sup>1</sup>	0	W	0	0	W	W	W
Total Production Taxes	2,617	3,636	3,990	5,331	5,932	7,501	12,507
<b>Superfund</b>	W	W	W	W	W	W	70
<b>Import Duties</b>	W	W	W	W	W	W	87
<b>Sales, Use, and Property</b>	2,779	2,332	2,715	2,966	3,259	3,149	3,982
<b>Payroll</b>	1,320	1,307	1,332	1,427	1,499	1,459	1,814
<b>Other Taxes</b>	445	465	689	589	689	382	827
<b>Total Taxes Paid (Other Than Income Taxes)</b>	7,250	7,856	8,819	10,392	11,508	12,676	19,287
<b>Excise Taxes Collected</b>	51,186	48,312	50,901	51,211	50,548	49,076	46,389

<sup>1</sup> Nonenergy, and beginning in 2003, Downstream Natural Gas.

W = Data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T14. Selected U.S. Operating Statistics: FRS and Industry, 2002-2008**

Operating Statistics	2002	2003	2004	2005	2006	2007	2008
<b>Petroleum and Natural Gas</b>							
Net Production							
Crude Oil and Natural Gas Liquids (million barrels)							
FRS Companies	1,346	1,278	1,208	1,121	1,077	1,040	1,014
U.S. Industry <sup>1</sup>	2,759	2,679	2,646	2,521	2,463	2,522	2,512
FRS as a Percent of U.S. Industry <sup>2</sup>	48.8	47.7	45.6	44.5	43.7	41.2	40.3
Natural Gas (billion cubic feet)							
FRS Companies	8,713	8,344	8,174	7,774	7,926	8,356	8,739
U.S. Industry <sup>1</sup>	19,353	19,425	19,168	18,458	18,545	19,466	20,523
FRS as a Percent of U.S. Industry <sup>2</sup>	45.0	43.0	42.6	42.1	42.7	42.9	42.6
Net Imports							
Crude Oil and Natural Gas Liquids (million barrels)							
FRS Companies	631	738	918	732	658	605	580
U.S. Industry <sup>1</sup>	3,523	3,539	3,910	3,989	3,985	3,843	3,810
FRS as a Percent of U.S. Industry	17.9	20.8	23.5	18.4	16.5	15.7	15.2
Refinery Capacity (thousand barrels per day)							
FRS Companies	14,198	14,279	14,409	14,532	14,652	14,101	14,880
U.S. Industry <sup>1</sup>	17,339	17,500	17,729	17,912	18,021	18,171	18,249
FRS as a Percent of U.S. Industry	81.9	81.6	81.3	81.1	81.3	77.6	81.5
Refinery Output <sup>3</sup> (thousand barrels per day)							
FRS Companies	14,676	14,587	15,082	15,039	14,726	14,168	14,519
U.S. Industry <sup>1</sup>	17,655	17,970	18,297	18,252	17,975	18,561	17,561
FRS as a Percent of U.S. Industry	83.1	81.2	82.4	82.4	81.9	76.3	82.7
<b>Electric Power</b>							
Net Summer Capacity (million kilowatts)							
FRS Companies	-	29	34	34	34	9	2
U.S. Industry	905	948	963	978	986	999	NA
FRS as a Percent of U.S. Industry	-	3.0	3.5	3.5	3.5	0.9	NA
Net Generation (billion kilowatt hours)							
FRS Companies	-	107	112	122	120	19	9
U.S. Industry	3,859	3,883	3,971	4,055	4,065	4,160	NA
FRS as a Percent of U.S. Industry	-	2.8	2.8	3.0	2.9	0.5	NA

<sup>1</sup> U.S. area is defined to include the 50 States, District of Columbia, U.S. Virgin Islands, and Puerto Rico.

<sup>2</sup> FRS companies' production does not include royalty interest production. Total U.S. production includes the royalty interest portion of the FRS companies' production. Therefore, the data presented in this table for the FRS companies and for total industry are not directly comparable. However, an estimate can be made by multiplying the FRS companies' data by 7/6 to account for the royalty interest.

<sup>3</sup> For FRS companies, includes refinery output at own refineries for own account and at others' refineries for own account.

- = Not reported.

NA = Not available.

Note: The data for total U.S. production of crude oil and natural gas liquids and natural gas (dry) utilized in this report are taken from Energy Information Administration, Form EIA-23 (Annual Survey of Domestic Oil and Gas Reserves); see U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves Annual Report). This source is utilized in order to preserve consistency between production reported in the context of oil and gas reserves and reserve additions and production reported elsewhere in this report.

Sources: Industry data - Petroleum net production: Energy Information Administration (EIA), Form EIA-23; see Advance Summary of the U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves Annual Report. Net imports: Energy Information Administration, Form EIA-814, Monthly Imports Report, and data compiled for the International Energy Agency by the Petroleum Supply Division, Office of Oil and Gas, EIA. Refinery capacity and refinery output: EIA, Forms EIA-820 (Annual Refinery Report) and EIA-810 (Monthly Refinery Report); see Petroleum Supply Annual. Electric capacity and electric generation: EIA, Form EIA-860, Annual Electric Generator Reports; Form EIA-867, Annual Nonutility Power Producer Report; Form EIA-860A, Annual Electric Generator Report—Utility; Form EIA-860B, Annual Electric Generator Report—Nonutility; Form EIA-906 and Form EIA-759, Power Plant Reports; see Annual Energy Review.

FRS companies' data - Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T15. Oil and Natural Gas Exploration and Development Expenditures, 2002-2008**  
(Million 2008 Dollars)

	2002	2003	2004	2005	2006	2007	2008
<b>United States</b>							
<b>Exploration</b>							
Acquisition of Unproved Acreage	2,686	1,601	2,887	4,074	19,372	7,742	24,905
Geological and Geophysical	967	760	963	1,069	1,223	1,384	1,510
Drilling and Equipping <sup>1</sup>	3,009	2,911	2,553	3,923	5,833	5,226	6,751
Other	980	810	976	1,108	1,160	1,290	1,516
Total Exploration	7,642	6,082	7,379	10,172	27,588	15,642	34,682
<b>Development</b>							
Acquisition of Proved Acreage	8,917	6,976	8,504	14,640	37,986	8,127	12,817
Lease Equipment	3,916	4,192	4,306	3,798	5,505	5,505	6,252
Drilling and Equipping <sup>1</sup>	12,614	12,198	14,429	19,491	27,086	30,543	38,517
Other <sup>2</sup>	4,375	2,097	1,921	2,698	3,810	6,514	5,598
Total Development	29,822	25,463	29,160	40,627	74,386	50,689	63,184
<b>Total U.S. Exploration and Development</b>	<b>37,464</b>	<b>31,545</b>	<b>36,539</b>	<b>50,799</b>	<b>101,973</b>	<b>66,332</b>	<b>97,866</b>
<b>Foreign</b>							
<b>Exploration</b>							
Acquisition of Unproved Acreage	3,048	1,552	684	5,565	4,801	967	1,761
Geological and Geophysical	1,106	998	1,082	1,072	1,329	1,305	1,634
Drilling and Equipping <sup>1</sup>	2,483	2,586	2,834	2,976	3,565	3,930	4,481
Other	1,018	1,094	981	1,359	1,350	1,454	1,509
Total Exploration	7,654	6,230	5,580	10,972	11,045	7,657	9,385
<b>Development</b>							
Acquisition of Proved Acreage	10,128	3,528	525	11,651	16,825	481	701
Lease Equipment	2,989	5,420	5,235	6,217	6,301	5,945	6,882
Drilling and Equipping <sup>1</sup>	9,468	11,290	12,642	14,634	16,994	14,414	16,352
Other <sup>2</sup>	6,707	6,052	4,407	7,792	11,004	15,113	17,028
Total Development	29,292	26,289	22,808	40,295	51,123	35,953	40,963
<b>Total Foreign Exploration and Development</b>	<b>36,945</b>	<b>32,519</b>	<b>28,389</b>	<b>51,267</b>	<b>62,168</b>	<b>43,610</b>	<b>50,348</b>

<sup>1</sup> Expenditure incurred in a given year not cumulative (includes work-in-progress adjustment).

<sup>2</sup> Includes support equipment.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T16. U.S. and Foreign Exploration and Development Expenditures, 2008**  
(Million 2008 Dollars)

	Worldwide	United States			Foreign
		Total	Onshore	Offshore	
<b>Exploration and Development Expenditures</b>					
<b>Exploration Expenditures</b>					
Unproved Acreage	26,666	24,905	19,213	5,692	1,761
Drilling and Equipping:					
Completed Well Costs	-	4,680	2,910	1,770	-
Work-in-progress Adjustment	-	2,071	615	1,456	-
Total Drilling and Equipping	11,232	6,751	3,525	3,226	4,481
Geological and Geophysical	3,144	1,510	719	791	1,634
Other, Including Direct Overhead	3,025	1,516	752	764	1,509
<b>Total Exploration Expenditures</b>	<b>44,067</b>	<b>34,682</b>	<b>24,209</b>	<b>10,473</b>	<b>9,385</b>
<b>Development Expenditures</b>					
Proved Acreage (Including Mergers and Acquisitions)	13,518	12,817	11,358	1,459	701
Drilling and Equipping:					
Completed Well Costs	-	30,768	27,692	3,076	-
Work-in-progress Adjustment	-	7,749	5,007	2,742	-
Total Drilling and Equipping	54,869	38,517	32,699	5,818	16,352
Lease Equipment	13,134	6,252	4,002	2,250	6,882
Other Development					
Support Equipment	1,698	1,529	1,270	259	169
Other, Including Direct Overhead	20,928	4,069	2,862	1,207	16,859
<b>Total Development Expenditures</b>	<b>104,147</b>	<b>63,184</b>	<b>52,191</b>	<b>10,993</b>	<b>40,963</b>
<b>Total Exploration and Development Expenditures</b>	<b>148,214</b>	<b>97,866</b>	<b>76,400</b>	<b>21,466</b>	<b>50,348</b>

- = Not reported.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T17. Exploration and Development Expenditures by Region, 2002-2008**  
(Million 2008 Dollars)

	2002	2003	2004	2005	2006	2007	2008
<b>Exploration Expenditures</b>							
U.S. Onshore	3,560	2,090	3,667	5,581	15,457	10,985	24,209
U.S. Offshore	4,082	3,992	3,712	4,591	12,130	4,657	10,473
Total United States	7,642	6,082	7,379	10,172	27,588	15,642	34,682
Canada	1,995	1,511	1,472	2,028	2,212	1,633	1,909
Europe <sup>1</sup>	1,440	725	464	912	1,050	1,051	1,030
Former Soviet Union <sup>2</sup>	553	797	330	638	158	181	W
Africa	1,522	1,896	1,508	2,312	2,493	2,129	W
Middle East	142	152	142	340	487	50	137
Other Eastern Hemisphere	1,320	763	991	4,110	1,566	1,667	2,367
Other Western Hemisphere	681	385	674	632	3,079	947	W
Total Foreign	7,654	6,230	5,580	10,972	11,045	7,657	9,385
<b>Worldwide Exploration Expenditures</b>	<b>15,295</b>	<b>12,312</b>	<b>12,959</b>	<b>21,144</b>	<b>38,633</b>	<b>23,299</b>	<b>44,067</b>
<b>Development Expenditures</b>							
U.S. Onshore	22,737	15,099	21,067	32,910	58,315	40,951	52,191
U.S. Offshore	7,085	10,364	8,093	7,716	16,071	9,739	10,993
Total United States	29,822	25,463	29,160	40,627	74,386	50,689	63,184
Canada	5,880	4,141	4,474	7,817	15,601	4,282	4,502
Europe <sup>1</sup>	10,094	5,881	4,477	5,691	8,405	7,234	7,387
Former Soviet Union <sup>2</sup>	946	1,647	1,960	6,153	2,380	2,810	W
Africa	4,474	8,695	6,231	9,305	11,010	10,657	W
Middle East	769	973	1,282	1,236	2,817	3,175	4,325
Other Eastern Hemisphere	5,975	4,034	3,225	8,919	5,407	5,302	7,202
Other Western Hemisphere	1,154	919	1,159	1,174	5,503	2,493	W
Total Foreign	29,292	26,289	22,808	40,295	51,123	35,953	40,963
<b>Worldwide Development Expenditures</b>	<b>59,114</b>	<b>51,752</b>	<b>51,968</b>	<b>80,921</b>	<b>125,509</b>	<b>86,642</b>	<b>104,147</b>
<b>Total Exploration and Development Expenditures</b>							
U.S. Onshore	26,297	17,189	24,734	38,492	73,772	51,935	76,400
U.S. Offshore	11,167	14,356	11,804	12,307	28,201	14,396	21,466
Total United States	37,464	31,545	36,539	50,799	101,973	66,332	97,866
Canada	7,875	5,652	5,946	9,845	17,813	5,915	6,411
Europe <sup>1</sup>	11,534	6,606	4,941	6,603	9,454	8,285	8,417
Former Soviet Union <sup>2</sup>	1,499	2,444	2,289	6,791	2,537	2,991	3,220
Africa	5,995	10,591	7,738	11,616	13,503	12,785	14,163
Middle East	912	1,125	1,425	1,575	3,304	3,225	W
Other Eastern Hemisphere	7,296	4,797	4,216	13,030	6,974	6,969	9,569
Other Western Hemisphere	1,835	1,304	1,833	1,806	8,582	3,440	W
Total Foreign	36,945	32,519	28,389	51,267	62,168	43,610	50,348
<b>Worldwide Exploration and Development Expenditures</b>	<b>74,409</b>	<b>64,065</b>	<b>64,927</b>	<b>102,066</b>	<b>164,142</b>	<b>109,942</b>	<b>148,214</b>

<sup>1</sup> Prior to 2006, this region comprised of European member countries of the OECD.

<sup>2</sup> Prior to 2006, this region comprised of the Former Soviet Union and East Europe.

W = Data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T18. Production (Lifting) Costs by Region, 2002-2008**  
(Million 2008 Dollars)

	2002	2003	2004	2005	2006	2007	2008
<b>United States</b>							
Taxes Other Than Income Taxes	2,576	3,605	3,952	5,295	5,903	7,475	12,475
Other Costs	12,183	12,017	13,074	14,647	17,941	21,567	25,082
Total Production Costs	14,758	15,622	17,026	19,942	23,844	29,043	37,557
U.S. Onshore	11,364	12,161	13,037	15,351	18,997	23,976	31,442
U.S. Offshore	3,394	3,461	3,989	4,591	4,847	5,067	6,115
<b>Canada</b>							
Royalty Expenses	0	0	0	0	0	0	0
Taxes Other Than Income Taxes	128	137	131	154	151	147	151
Other Costs	2,712	3,249	2,910	3,535	3,702	3,829	4,193
Total Production Costs	2,841	3,386	3,041	3,689	3,854	3,976	4,344
<b>Europe<sup>1</sup></b>							
Royalty Expenses	58	W	W	0	W	W	W
Taxes Other Than Income Taxes	537	W	W	1,252	W	W	W
Other Costs	4,023	4,724	4,597	5,238	5,174	6,034	5,825
Total Production Costs	4,618	5,630	5,307	6,489	6,806	7,363	7,847
<b>Former Soviet Union<sup>2</sup></b>							
Royalty Expenses	0	0	W	15	0	0	0
Taxes Other Than Income Taxes	0	35	W	236	79	68	232
Other Costs	131	204	302	417	422	552	727
Total Production Costs	131	239	367	668	501	620	959
<b>Africa</b>							
Royalty Expenses	0	0	0	W	W	W	W
Taxes Other Than Income Taxes	444	680	873	W	W	W	W
Other Costs	2,037	2,009	2,355	2,508	2,877	3,748	4,665
Total Production Costs	2,481	2,690	3,229	3,859	4,797	6,186	7,309
<b>Middle East</b>							
Royalty Expenses	0	0	0	0	0	0	W
Taxes Other Than Income Taxes	54	23	27	18	1,891	936	W
Other Costs	591	595	604	629	874	845	1,172
Total Production Costs	645	618	631	648	2,765	1,780	2,509
<b>Other Eastern Hemisphere</b>							
Royalty Expenses and							
Taxes Other Than Income Taxes	683	778	1,034	1,266	1,323	1,692	2,456
Other Costs	2,358	2,117	2,884	2,441	2,660	3,223	3,573
Total Production Costs	3,041	2,895	3,918	3,707	3,983	4,916	6,029
<b>Other Western Hemisphere</b>							
Royalty Expenses and							
Taxes Other Than Income Taxes	325	452	561	733	740	612	733
Other Costs	745	666	615	980	1,000	1,158	1,273
Total Production Costs	1,070	1,118	1,176	1,713	1,740	1,770	2,006
<b>Total Foreign</b>							
Royalty Expenses	177	W	W	W	279	259	307
Taxes Other Than Income Taxes	2,053	W	W	W	7,456	6,963	9,268
Other Costs	12,597	13,564	14,268	15,747	16,710	19,390	21,428
Total Production Costs	14,827	16,576	17,668	20,773	24,445	26,612	31,003

<sup>1</sup>Prior to 2006, consisted of only European members of the OECD.

<sup>2</sup>Prior to 2006, also included East Europe.

W = Data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T19. Oil and Natural Gas Reserves: FRS and Industry, 2008**

	Beginning Reserves	Plus Reserve Additions <sup>1</sup>	Plus Net Purchases	Less Production	Equals Ending Reserves	Replacement Rate (percent)
<b>Crude Oil and Natural Gas Liquids</b>						
(million barrels)						
U.S. Onshore <sup>2</sup>						
Total Industry	25,931	-194	216	2,008	23,945	-10
FRS Companies	10,696	-258	119	715	9,842	-36
All Other	15,235	64	97	1,293	14,103	5
U.S. Offshore <sup>2</sup>						
Total Industry	4,529	426	0	504	4,451	85
FRS Companies	3,043	226	1	298	2,972	76
All Other	1,487	200	-1	206	1,479	97
U.S. Total <sup>2</sup>						
Total Industry	30,460	232	216	2,512	28,396	9
FRS Companies	13,739	-32	120	1,014	12,814	-3
All Other	16,721	264	96	1,499	15,582	18
<b>FRS Companies' Foreign Oil Reserves</b>						
Canada	1,780	W	W	153	1,372	W
Europe	2,613	W	W	383	2,308	W
Former Soviet Union	1,369	692	-63	92	1,906	752
Africa	5,041	W	W	548	5,070	W
Middle East	1,595	585	0	150	2,030	389
Other Eastern Hemisphere	1,718	W	W	227	1,911	W
Other Western Hemisphere	568	W	W	66	480	104
Total Foreign	14,684	2,203	-192	1,618	15,077	136
<b>Worldwide Total for FRS Companies</b>	<b>28,423</b>	<b>2,172</b>	<b>-72</b>	<b>2,632</b>	<b>27,891</b>	<b>83</b>
<b>Dry Natural Gas</b>						
(billion cubic feet)						
U.S. Onshore <sup>2</sup>						
Total Industry	223,287	25,116	980	18,273	231,110	137
FRS Companies	101,425	8,001	1,561	7,677	103,310	104
All Other	121,863	17,115	-581	10,596	127,800	162
U.S. Offshore <sup>2</sup>						
Total Industry	14,439	1,442	-85	2,250	13,546	64
FRS Companies	8,343	305	17	1,062	7,603	29
All Other	6,096	1,137	-102	1,188	5,943	96
U.S. Total <sup>2</sup>						
Total Industry	237,726	26,558	895	20,523	244,656	129
FRS Companies	109,768	8,307	1,578	8,739	110,913	95
All Other	127,958	18,251	-683	11,784	133,743	155
<b>FRS Companies' Foreign Natural Gas Reserves</b>						
Canada	10,593	478	-64	1,140	9,868	42
Europe	11,725	W	W	1,650	9,956	W
Former Soviet Union	2,124	642	-33	85	2,647	W
Africa	10,577	W	W	562	10,601	104
Middle East	6,112	W	W	357	7,566	507
Other Eastern Hemisphere	25,047	W	W	1,990	26,038	W
Other Western Hemisphere	15,348	W	W	1,296	15,065	83
Total Foreign	81,527	7,066	227	7,080	81,741	100
<b>Worldwide Total for FRS Companies</b>	<b>191,295</b>	<b>15,373</b>	<b>1,805</b>	<b>15,819</b>	<b>192,654</b>	<b>97</b>

<sup>1</sup> Includes revisions of previous estimates, improved recovery, and extensions and discoveries.

<sup>2</sup>The data reported for the FRS companies do not include royalty interest. Total U.S. industry data include the royalty interest portion of the FRS companies' reported amounts. Therefore, the data presented in this table for the FRS companies and for total industry are not directly comparable. However, an estimate can be made by multiplying the FRS companies' data by 7/6 to account for the royalty interest.

Sources: Industry data - Energy Information Administration Form EIA-23 (Annual Survey of Domestic Oil and Gas Reserves); see *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves Annual Report*.

FRS companies' data - Energy Information Administration, Form EIA-28 (Financial Reporting System).



**Table T20. Oil and Natural Gas Reserve Balances, 2008**

Table 120: Oil and Natural Gas Reserve Balances, 2009

Reserves Statistics	Worldwide Total	United States			Total Foreign
		Total	Onshore	Offshore	
<b>Crude Oil and Natural Gas Liquids</b> (million barrels)					
Beginning of Period	28,423	13,739	10,696	3,042	14,684
Revisions of Previous Estimates	740	-826	-823	-3	1,566
Improved Recovery	524	321	252	69	203
Purchases of Minerals-in-Place	182	181	164	17	0
Extensions & Discoveries	907	473	313	160	434
Production	-2,632	-1,014	-715	-298	-1,618
Sales of Minerals-in-Place	-254	-61	-45	-16	-193
End of period	27,891	12,814	9,842	2,972	15,077
Proportionate Interest in Investee Reserves	--	--	--	--	8,071
<b>Natural Gas Reserves</b> (billion cubic feet)					
Beginning of Period	191,295	109,768	101,424	8,343	81,527
Revisions of Previous Estimates	-1,074	-5,200	-4,932	-268	4,126
Improved Recovery	1,949	1,621	1,584	37	327
Purchases of Minerals-in-Place	3,609	3,117	2,972	146	491
Extensions & Discoveries	14,498	11,885	11,349	536	2,613
Production	-15,818	-8,739	-7,677	-1,062	-7,080
Sales of Minerals-in-Place	-1,804	-1,540	-1,411	-129	-264
End of Period	192,654	110,913	103,310	7,603	81,741
Proportionate Interest in Investee Reserves	--	--	--	--	45,886
See footnotes at end of table.					

See footnotes at end of table.

**Table T20. Oil and Natural Gas Reserve Balances, 2008 (Continued)**

Reserves Statistics	Foreign						
	Total	Canada	Europe	Former Soviet Union	Africa and Middle East	Other Eastern Hemisphere	Other Western Hemisphere
Crude Oil and Natural Gas Liquids (million barrels)							
Beginning of Period	14,684	1,780	2,613	1,369	6,636	1,718	568
Revisions of Previous Estimates	1,566	-411	38	638	979	321	1
Improved Recovery	203	W	W	W	W	W	48
Purchases of Minerals-in-Place	0	W	W	W	W	W	W
Extensions & Discoveries	434	165	38	W	121	90	W
Production	-1,618	-153	-383	-92	-698	-227	-66
Sales of Minerals-in-Place	-193	-9	-29	W	0	0	W
End of period	15,077	1,372	2,308	1,906	7,100	1,911	480
Proportionate Interest in Investee Reserves	8,071	W	W	4,734	W	W	W
Natural Gas Reserves (billion cubic feet)							
Beginning of Period	81,527	10,593	11,725	2,124	16,689	25,047	15,348
Revisions of Previous Estimates	4,126	-160	-176	622	2,159	1,827	-145
Improved Recovery	327	16	W	W	W	W	155
Purchases of Minerals-in-Place	491	19	W	0	W	W	W
Extensions & Discoveries	2,613	622	86	0	180	662	1,063
Production	-7,080	-1,140	-1,650	-85	-919	-1,990	-1,296
Sales of Minerals-in-Place	-264	-83	-71	W	0	W	W
End of Period	81,741	9,868	9,956	2,647	18,167	26,038	15,065
Proportionate Interest in Investee Reserves	45,886	0	W	7,123	W	W	W

-- = Not applicable.

W = Data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T21. Exploration and Development Expenditures, Reserves, and Production  
by Region: FRS and Industry, 2008 and Percent Change from 2007**

	United States			Foreign Total
	Total	Onshore	Offshore	
Exploration and Development Expenditures (million dollars)				
FRS Companies	97,866	76,400	21,466	50,348
Percent Change from Prior Year	47.5	47.1	49.1	15.4
Wells Completed				
FRS Companies	13,217	13,035	182	4,222
Percent Change from Prior Year	11.7	12.0	-6.7	-0.4
Industry	60,220	NA	NA	NA
Percent Change from Prior Year	24.2	NA	NA	NA
Success Rate <sup>1</sup> (percent)				
FRS Companies	98.1	98.4	79.1	95.3
Industry	90.3	NA	NA	NA
Crude Oil and NGL Production <sup>2</sup> (million barrels)				
FRS Companies	1,014	715	298	1,618
Percent Change from Prior Year	-2.6	0.9	-10.0	-4.8
Industry	2,512	2,008	504	27,406
Percent Change from Prior Year	-0.4	4.3	-15.6	0.6
Crude Oil and NGL Reserve Interests <sup>3</sup> (million barrels)				
FRS Companies	12,814	9,842	2,972	23,148
Percent Change from Prior Year	-6.7	-8.0	-2.3	5.0
Natural Gas Production (billion cubic feet)				
FRS Companies	8,739	7,677	1,062	7,080
Percent Change from Prior Year	4.6	8.2	-15.7	2.0
Industry	20,523	18,273	2,250	108,261
Percent Change from Prior Year	5.4	10.0	-21.2	28.0
Natural Gas Reserve Interests (billion cubic feet)				
FRS Companies	110,913	103,310	7,603	129,271
Percent Change from Prior Year	1.0	1.9	-8.9	1.5
See footnotes at end of table.				

Table is continued on the following page.

**Table T21. Exploration and Development Expenditures, Reserves, and Production  
by Region: FRS and Industry, 2008 and Percent Change from 2007 (Continued)**

	Foreign						
	Total	Canada	Europe & Former Soviet Union <sup>4</sup>	Africa	Middle East	Other Eastern Hemisphere	Other Western Hemisphere
<b>Exploration and Development Expenditures</b> (million 2008 dollars)							
FRS Companies	50,348	6,411	11,637	14,163	W	9,569	W
Percent Change from Prior Year	15.4	8.4	3.2	10.8	W	37.3	W
<b>Wells Completed</b>							
FRS Companies	4,222	2,279	W	391	W	779	490
Percent Change from Prior Year	-0.4	-6.6	W	12.2	W	13.5	-3.9
Industry	NA	NA	NA	NA	NA	NA	NA
Percent Change from Prior Year	NA	NA	NA	NA	NA	NA	NA
<b>Success Rate <sup>1</sup></b> (percent)							
FRS Companies	95	96	90	90	100	98	W
Industry	NA	NA	NA	NA	NA	NA	NA
<b>Crude Oil and NGL Production <sup>2</sup></b> (million barrels)							
FRS Companies	1,618	153	475	548	150	227	66
Percent Change from Prior Year	-4.8	0.9	-10.1	-2.9	1.9	-6.6	0.0
Industry	27,406	3,238	6,421	3,754	9,563	2,894	3,592
Percent Change	0.6	168.0	-1.4	-0.3	4.1	0.3	-2.7
<b>Crude Oil and NGL Reserve Interests <sup>3</sup></b> (million barrels)							
FRS Companies	23,148	W	W	W	3,478	W	W
Percent Change from Prior Year	5.0	W	W	W	10.9	W	W
<b>Natural Gas Production</b> (billion cubic feet)							
FRS Companies	7,080	1,140	1,735	562	357	1,990	1,296
Percent Change from Prior Year	2.0	-8.9	1.4	18.6	15.8	3.4	1.8
Industry	108,261	6,187	38,398	7,586	13,458	14,521	7,550
Percent Change from Prior Year	28.0	-4.8	1.1	13.0	7.2	5.0	8.3
<b>Natural Gas Reserve Interests</b> (billion cubic feet)							
FRS Companies	129,271	9,868	33,209	W	W	W	W
Percent Change from Prior Year	2	-7	0	W	W	W	W

<sup>1</sup>Success Rate defined as the total number of successful well completions during the period divided by the total number of wells drilled.

<sup>2</sup>Crude oil plus natural gas liquids. Foreign includes ownership interest production and foreign access production.

<sup>3</sup>Foreign includes net ownership interest reserves (66.6 percent of total foreign) and "Other Access" reserves (33.4 percent of total foreign).

"Other Access" reserves include proportional interest in investee reserves and foreign access reserves.

<sup>4</sup>Europe combined with the former Soviet Union to avoid disclosure.

- = Not available.

W = Data withheld to avoid disclosure.

Sources: Reserve additions and production, U.S. - Energy Information Administration Form EIA-23 (Annual Survey of Domestic Oil and Gas Reserves); see *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves*. Reserve Additions, Foreign - *British Petroleum Statistical Review of World Energy*. Wells Completed, U.S. - Energy Information Administration, *Monthly Energy Review*; Foreign - *World Oil*.

FRS companies' data - Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T22. Oil and Natural Gas Acreage for FRS Companies, 2002-2008**  
(Thousand Acres)

	2002	2003	2004	2005	2006	2007	2008
<b>Net Acreage</b>							
U.S. Onshore							
Developed	37,103	36,721	38,287	38,702	39,682	36,760	39,278
Undeveloped	40,280	42,891	39,891	44,631	48,650	54,662	56,504
U.S. Offshore							
Developed	5,281	5,375	5,520	5,106	4,544	4,381	4,146
Undeveloped	21,929	20,875	22,006	20,917	18,755	16,022	17,680
Foreign							
Developed	37,603	33,952	33,561	34,990	36,572	36,206	36,493
Undeveloped	429,394	312,769	273,697	300,277	291,292	298,319	290,841
<b>Gross Acreage</b>							
U.S. Onshore							
Developed	69,641	65,367	64,704	64,550	62,892	60,567	62,660
Undeveloped	64,841	66,918	62,194	69,544	75,411	84,186	86,061
U.S. Offshore							
Developed	9,802	9,331	9,818	8,947	7,306	6,937	6,500
Undeveloped	32,384	31,134	32,548	30,772	26,915	22,961	23,453
Foreign							
Developed	81,171	70,516	65,597	78,233	92,075	90,538	89,955
Undeveloped	799,007	608,666	532,672	546,357	509,714	507,220	489,817

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

Table T23. U.S. Net Wells Completed and Net In-Progress Wells at Year End: FRS and Industry, 2002-2008							
	2002	2003	2004	2005	2006	2007	2008
<b>Number of Net Wells Completed During Year for FRS Companies</b>							
Onshore							
Net Exploratory Wells							
Dry Holes	119	93	86	65	64	69	75
Oil Wells	21	19	27	29	12	57	84
Natural Gas Wells	164	164	226	294	360	509	427
Total Exploratory Wells	304	275	338	388	435	635	587
Net Development Wells							
Dry Holes	220	225	197	222	184	139	132
Oil Wells	1,187	1,567	2,005	2,006	2,274	1,875	2,387
Natural Gas Wells	4,982	5,539	6,246	7,248	8,737	8,991	9,929
Total Development Wells	6,389	7,331	8,448	9,476	11,194	11,005	12,448
Offshore							
Net Exploratory Wells							
Dry Holes	52	43	39	33	30	25	12
Oil Wells	35	20	11	11	10	5	17
Natural Gas Wells	53	36	29	24	22	15	5
Total Exploratory Wells	140	98	78	67	63	44	34
Net Development Wells							
Dry Holes	38	13	14	16	15	12	26
Oil Wells	135	95	85	99	102	90	83
Natural Gas Wells	134	75	73	56	62	49	39
Total Development Wells	307	183	172	172	178	151	148
Total United States							
Net Exploratory Wells							
Dry Holes	171	135	125	98	94	93	88
Oil Wells	56	38	37	39	22	62	101
Natural Gas Wells	217	199	254	318	383	523	432
Total Exploratory Wells	443	373	416	455	498	679	620
Net Development Wells							
Dry Holes	259	238	211	239	199	151	158
Oil Wells	1,321	1,662	2,090	2,105	2,375	1,965	2,471
Gas Wells	5,116	5,614	6,319	7,304	8,798	9,039	9,969
Total Development Wells	6,696	7,514	8,620	9,648	11,373	11,155	12,597
<b>Number of Net Wells Completed During Year for Total Industry</b>							
Net Exploratory Wells							
Dry Holes	1,283	1,266	1,200	1,577	1,870	1,455	1,926
Oil Wells	239	326	353	429	576	747	965
Natural Gas Wells	701	892	1,323	1,452	1,559	3,307	2,969
Total Exploratory Wells	2,223	2,484	2,876	3,458	4,005	5,509	5,860
Net Development Wells							
Dry Holes	2,327	2,422	2,274	3,067	3,711	3,200	3,942
Oil Wells	5,987	7,139	7,350	9,404	11,763	11,796	16,953
Natural Gas Wells	16,027	18,630	20,493	25,945	30,028	27,996	33,465
Total Development Wells	24,341	28,191	30,117	38,418	45,502	42,992	54,360
<b>Number of Net In-Progress Wells At Year End for FRS Companies</b>							
Onshore							
Exploratory Wells	66	84	126	134	184	190	187
Development Wells	1,315	1,209	1,785	2,162	2,133	2,373	3,642
Total In-Progress Wells	1,381	1,293	1,911	2,295	2,317	2,563	3,829
Offshore							
Exploratory Wells	55	46	52	58	25	25	33
Development Wells	47	78	108	87	73	84	85
Total In-Progress Wells	102	124	159	145	98	109	118
Total United States							
Exploratory Wells	120	130	177	192	209	215	220
Development Wells	1,362	1,286	1,893	2,249	2,206	2,457	3,727
Total In-Progress Wells	1,482	1,416	2,071	2,441	2,415	2,672	3,947
Note: Sum of components may not equal total due to independent rounding.							
Sources: Industry data - Energy Information Administration, <i>Monthly Energy Review</i> , Table 5.2.							
FRS companies' data - Energy Information Administration, Form EA-28 (Financial Reporting System).							

**Table T24. U.S. Net Drilling Footage and Net Producing Wells: FRS and Industry, 2002-2008**

	2002	2003	2004	2005	2006	2007	2008
<b>FRS Companies</b>							
<b>Onshore</b>	(thousand feet)						
Exploratory Well Footage							
Dry Hole Footage	1,000	823	821	640	660	615	712
Oil Well Footage	141	152	273	374	132	899	1,396
Natural Gas Well Footage	1,284	1,655	2,213	3,019	2,988	4,194	4,071
Total Exploratory Footage	2,425	2,630	3,307	4,033	3,780	5,708	6,179
Development Well Footage							
Dry Hole Footage	1,716	1,507	1,475	1,599	1,403	932	872
Oil Well Footage	6,928	8,716	10,352	10,314	12,705	9,856	16,088
Natural Gas Well Footage	32,078	40,507	44,999	53,568	65,745	74,612	80,243
Total Development Footage	40,722	50,730	56,827	65,481	79,853	85,400	97,203
<b>Offshore</b>							
Exploratory Well Footage							
Dry Hole Footage	652	628	632	616	507	410	211
Oil Well Footage	589	289	167	184	180	114	346
Natural Gas Well Footage	697	504	391	309	303	159	93
Total Exploratory Footage	1,938	1,421	1,191	1,110	990	683	649
Development Well Footage							
Dry Hole Footage	369	165	163	161	135	109	166
Oil Well Footage	1,362	1,216	833	966	895	1,044	836
Natural Gas Well Footage	1,370	905	834	685	746	531	517
Total Development Footage	3,101	2,286	1,830	1,812	1,776	1,684	1,518
<b>Total United States</b>							
Exploratory Well Footage							
Dry Hole Footage	1,652	1,451	1,453	1,256	1,167	1,025	922
Oil Well Footage	730	441	440	558	312	1,013	1,742
Natural Gas Well Footage	1,981	2,159	2,605	3,328	3,291	4,353	4,164
Total Exploratory Footage	4,363	4,051	4,498	5,142	4,770	6,391	6,828
Development Well Footage							
Dry Hole Footage	2,085	1,672	1,638	1,760	1,538	1,041	1,037
Oil Well Footage	8,290	9,932	11,185	11,280	13,600	10,900	16,924
Natural Gas Well Footage	33,448	41,412	45,833	54,253	66,491	75,143	80,760
Total Development Footage	43,823	53,016	58,656	67,293	81,629	87,084	98,721
<b>Total Industry</b>							
Exploratory Well Footage							
Dry Hole Footage	8,587	8,826	8,134	8,551	11,107	13,054	11,130
Oil Well Footage	1,611	1,996	2,957	3,700	4,452	5,236	7,389
Natural Gas Well Footage	5,062	5,912	8,036	9,191	9,845	10,990	17,066
Total Exploratory Footage	15,260	16,734	19,127	21,442	25,404	29,280	35,585
Development Well Footage							
Dry Hole Footage	12,098	14,739	11,922	13,243	18,425	21,699	20,149
Oil Well Footage	26,401	30,002	33,734	42,312	56,042	74,850	80,993
Natural Gas Well Footage	87,326	110,559	119,917	150,587	184,659	216,978	195,013
Total Development Footage	125,825	155,300	165,573	206,142	259,127	313,527	296,155
<b>Number of Net Producing Wells for FRS Companies</b>							
	(number of wells)						
<b>Onshore</b>							
Oil Wells	69,021	71,863	69,048	67,632	74,817	74,223	77,618
Natural Gas Wells	89,102	105,439	116,741	125,681	137,862	135,330	144,909
Total Producing Wells	158,123	177,302	185,789	193,313	212,679	209,553	222,527
<b>Offshore</b>							
Oil Wells	4,384	3,777	3,187	2,562	2,453	2,647	2,194
Natural Gas Wells	3,011	2,306	2,264	1,697	1,317	1,196	833
Total Producing Wells	7,395	6,083	5,450	4,258	3,770	3,843	3,027
<b>Total United States</b>							
Oil Wells	73,405	75,640	72,234	70,193	77,270	76,870	79,812
Natural Gas Wells	92,113	107,744	119,005	127,378	139,179	136,526	145,742
Total Producing Wells	165,518	183,384	191,239	197,571	216,450	213,396	225,553
Note: Sum of components may not equal total due to independent rounding.							
Sources: Well footage, U.S. - Energy Information Administration, Annual <i>Energy Review</i> .							
FRS companies' data - Energy Information Administration, Form EIA-28 (Financial Reporting System).							

**Table T25. U.S. Net Wells Completed and Average Depth, 2007 and 2008**

	Total United States			U.S. Onshore			U.S. Offshore		
	2007	2008	Percent Change	2007	2008	Percent Change	2007	2008	Percent Change
<b>Exploration Wells</b>									
Oil Wells									
Wells Completed	62.4	100.9	61.7	57.3	84.4	47.3	5.1	16.5	223.5
Average Depth (thousand feet)	16.2	17.3	6.3	15.7	16.5	5.4	22.4	21.0	-6.3
Natural Gas Wells									
Wells Completed	523.2	432.0	-17.4	508.6	427.1	-16.0	14.6	4.9	-66.4
Average Depth (thousand feet)	8.3	9.6	15.8	8.2	9.5	15.6	10.9	19.0	74.5
Dry Holes									
Wells Completed	93.4	87.5	-6.3	68.8	75.2	9.3	24.6	12.3	-50.0
Average Depth (thousand feet)	11.0	10.5	-4.0	8.9	9.5	5.9	16.7	17.1	2.7
<b>Development Wells</b>									
Oil Wells									
Wells Completed	1,965.4	2,470.5	25.7	1,875.2	2,387.1	27.3	90.2	83.4	-7.5
Average Depth (thousand feet)	5.5	6.9	23.5	5.3	6.7	28.2	11.6	10.0	-13.4
Natural Gas Wells									
Wells Completed	9,039.1	9,968.5	10.3	8,990.5	9,929.2	10.4	48.6	39.3	-19.1
Average Depth (thousand feet)	8.3	8.1	-2.5	8.3	8.1	-2.6	10.9	13.2	20.4
Dry Holes									
Wells Completed	150.9	157.6	4.4	138.8	131.9	-5.0	12.1	25.7	112.4
Average Depth (thousand feet)	6.9	6.6	-4.6	6.7	6.6	-1.6	9.0	6.4	-28.5
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).									

**Table T26. Foreign Net Wells Completed, In-Progress Wells, and Producing Wells by Region, 2002-2008**

	2002	2003	2004	2005	2006	2007	2008
<b>Canada</b>							
Net Wells Completed During Year							
Exploratory Wells							
Dry Holes	156.6	146.4	106.1	174.2	37.9	35.0	44.2
Oil Wells	74.0	51.0	46.7	23.6	23.9	40.7	50.9
Natural Gas Wells	329.4	454.6	263.6	536.4	202.2	111.5	97.4
Total Exploratory Wells	560.0	652.0	416.4	734.2	264.0	187.2	192.5
Development Wells							
Dry Holes	151.2	161.4	160.3	85.4	173.5	45.5	47.7
Oil Wells	794.1	586.4	547.0	493.5	734.3	711.9	630.0
Natural Gas Wells	2,381.1	2,651.9	3,657.6	3,319.8	3,206.4	1,496.0	1,408.4
Total Development Wells	3,326.4	3,399.7	4,364.9	3,898.7	4,114.2	2,253.4	2,086.1
Net In-Progress Wells at Year End	190.0	275.8	274.3	459.2	336.5	249.7	356.8
Net Producing Wells							
Oil Wells	14,203.0	13,167.6	12,287.0	10,637.6	10,028.2	9,825.8	10,252.7
Natural Gas Wells	26,434.9	28,418.4	31,906.3	33,387.3	32,287.4	31,847.4	32,915.9
Total Producing Wells	40,637.9	41,586.0	44,193.2	44,024.9	42,315.6	41,673.2	43,168.6
<b>Europe and Former Soviet Union <sup>1</sup></b>							
Net Wells Completed During Year							
Exploratory Wells							
Dry Holes	11.2	12.7	17.0	19.4	8.6	7.5	10.0
Oil Wells	5.3	6.1	W	W	W	5.9	W
Natural Gas Wells	3.1	3.5	W	W	W	3.4	W
Total Exploratory Wells	19.6	22.3	26.5	29.3	30.1	16.8	W
Development Wells							
Dry Holes	W	W	W	5.9	3.6	W	W
Oil Wells	63.0	98.6	97.4	138.6	106.7	59.4	69.0
Natural Gas Wells	W	W	W	17.8	13.4	W	W
Total Development Wells	108.8	127.6	128.3	162.3	123.7	83.1	79.2
Net In-Progress Wells at Year End	38.7	49.1	39.1	65.6	44.2	43.3	45.5
Net Producing Wells							
Oil Wells	1,225.7	1,325.3	1,376.1	1,352.9	1,118.4	1,227.0	1,182.9
Natural Gas Wells	788.7	639.1	616.0	612.0	545.2	647.0	642.1
Total Producing Wells	2,014.4	1,964.4	1,992.1	1,964.9	1,663.6	1,874.0	1,825.0
<b>Africa and Middle East</b>							
Net Wells Completed During Year							
Exploratory Wells							
Dry Holes	26.8	25.2	23.7	22.9	20.1	28.3	33.2
Oil Wells	W	29.1	27.6	35.1	W	18.5	W
Natural Gas Wells	W	5.6	3.3	1.0	W	7.0	W
Total Exploratory Wells	67.5	59.9	54.6	59.0	49.2	53.8	W
Development Wells							
Dry Holes	11.3	13.2	8.5	14.3	17.9	17.8	8.4
Oil Wells	209.4	293.7	307.6	341.7	354.4	412.0	480.4
Natural Gas Wells	13.5	8.7	19.3	12.3	16.3	19.8	18.0
Total Development Wells	234.2	315.6	335.4	368.3	388.6	449.6	506.8
Net In-Progress Wells at Year End	57.0	64.6	64.0	67.1	84.3	89.9	81.6
Net Producing Wells							
Oil Wells	2,209.2	2,357.1	2,780.1	3,150.4	3,394.4	3,673.1	4,037.9
Natural Gas Wells	140.2	152.0	140.6	150.1	139.1	220.6	229.8
Total Producing Wells	2,349.4	2,509.1	2,920.7	3,300.5	3,533.5	3,893.7	4,267.7
See footnotes at end of table.							

Table is continued on the following page.



**Table T26. Foreign Net Wells Completed, In-Progress Wells, and Producing Wells by Region, 2002-2008 (Continued)**

	2002	2003	2004	2005	2006	2007	2008
<b>Other Eastern Hemisphere</b>							
Net Wells Completed During Year							
Exploratory Wells							
Dry Holes	36.8	37.2	26.9	21.9	22.7	21.0	15.6
Oil Wells	11.0	8.9	14.9	18.2	12.1	9.0	11.3
Natural Gas Wells	26.6	13.4	21.9	4.8	19.9	17.4	15.8
Total Exploratory Wells	74.4	59.5	63.7	44.9	54.7	47.4	42.7
Development Wells							
Dry Holes	3.0	2.5	3.6	7.7	2.7	0.5	2.5
Oil Wells	554.8	649.6	341.5	250.0	356.0	497.3	610.3
Natural Gas Wells	201.7	147.9	103.4	123.8	193.6	141.2	123.4
Total Development Wells	759.5	800.0	448.5	381.5	552.3	639.0	736.2
Net In-Progress Wells at Year End	30.9	50.5	41.9	26.0	84.3	97.6	65.6
Net Producing Wells							
Oil Wells	7,458.6	7,794.1	7,900.2	7,774.9	8,190.8	8,535.8	8,164.8
Natural Gas Wells	1,288.8	1,275.4	1,146.4	594.4	1,059.3	1,526.1	1,477.5
Total Producing Wells	8,747.4	9,069.5	9,046.6	8,369.3	9,250.1	10,061.9	9,642.3
<b>Other Western Hemisphere</b>							
Net Wells Completed During Year							
Exploratory Wells							
Dry Holes	13.2	10.7	11.2	12.4	12.7	5.3	19.0
Oil Wells	W	3.8	W	W	18.4	12.0	24.3
Natural Gas Wells	W	0.0	W	W	9.1	5.0	5.1
Total Exploratory Wells	21.3	14.5	16.3	31.1	40.2	22.3	48.4
Development Wells							
Dry Holes	W	W	W	5.4	8.2	W	W
Oil Wells	217.0	218.0	216.9	225.9	359.3	424.9	372.8
Natural Gas Wells	W	W	W	23.1	35.5	W	W
Total Development Wells	245.1	236.2	237.9	254.4	403.0	487.2	441.1
Net In-Progress Wells at Year End	31.6	8.6	19.5	18.0	25.6	55.5	41.4
Net Producing Wells							
Oil Wells	2,439.6	2,721.4	2,880.2	2,715.6	5,175.7	5,655.0	5,959.7
Natural Gas Wells	274.0	288.5	311.0	308.7	740.6	804.2	827.4
Total Producing Wells	2,713.6	3,009.9	3,191.2	3,024.3	5,916.3	6,459.2	6,787.1
<b>Total Foreign</b>							
Net Wells Completed During Year							
Exploratory Wells							
Dry Holes	244.6	232.2	184.9	250.8	102.0	97.1	122.0
Oil Wells	134.3	98.9	98.8	96.8	96.1	86.1	122.9
Natural Gas Wells	363.9	477.1	293.9	550.9	240.1	144.3	127.3
Total Exploratory Wells	742.8	808.2	577.5	898.5	438.2	327.5	372.2
Development Wells							
Dry Holes	171.2	184.3	183.8	118.7	205.9	76.9	74.9
Oil Wells	1,838.3	1,846.3	1,510.4	1,449.7	1,910.7	2,105.5	2,162.5
Natural Gas Wells	2,664.5	2,848.5	3,820.7	3,496.8	3,465.2	1,729.9	1,612.0
Total Development Wells	4,674.0	4,879.1	5,514.9	5,065.2	5,581.8	3,912.3	3,849.4
Net In-Progress Wells at Year End	348.2	448.6	438.8	635.9	574.9	536.0	590.9
Net Producing Wells							
Oil Wells	27,536.1	27,365.5	27,223.6	25,631.4	27,907.5	28,916.7	29,598.0
Natural Gas Wells	28,926.6	30,773.4	34,120.2	35,052.5	34,771.6	35,045.3	36,092.7
Total Producing Wells	56,462.7	58,138.9	61,343.8	60,683.9	62,679.1	63,962.0	65,690.7

<sup>1</sup>Europe combined with the former Soviet Union to avoid disclosure.

W = data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T27. Statement of Income for U.S. Refining/Marketing, 2002-2008**  
(Million 2008 Dollars)

Revenues and Costs	2002	2003	2004	2005	2006	2007	2008
<b>Refined Product Revenues</b>	320,546	363,270	466,494	592,746	643,386	648,992	812,149
<b>Refined Product Costs</b>							
Raw Materials Processed <sup>1</sup>	135,757	158,500	221,171	291,027	333,397	349,511	472,608
Refinery Energy Expense	10,809	13,160	13,412	12,979	14,241	14,441	19,502
Other Refinery Expense	19,080	17,110	16,549	18,087	19,222	21,150	26,298
Product Purchases	121,875	131,455	170,140	214,329	214,702	207,874	257,310
Other Product Supply Expense	14,794	11,289	6,834	8,651	10,697	8,558	12,448
Marketing Expense <sup>2</sup>	16,356	12,634	14,459	13,421	11,536	12,520	12,971
Total Refined Product Costs	318,670	344,148	442,564	561,639	603,794	614,055	801,137
<b>Refined Product Margin</b>	1,876	19,122	23,930	31,107	39,592	34,937	11,012
<b>Refined Products Sold</b> (million barrels)	8,394.7	8,063.7	8,329.9	8,160.5	7,766.4	7,322.2	7,437.3
<b>Dollars per Barrel Margin</b> <sup>3</sup>	0.22	2.37	2.87	3.81	5.10	4.77	1.48
<b>Other Refining/Marketing Revenues</b> <sup>4</sup>	18,699	12,305	15,710	17,369	13,286	12,318	17,337
<b>Other Refining/Marketing Expenses</b>							
Depreciation, Depletion, & Allowance	6,615	7,076	6,249	6,008	6,406	6,907	9,056
Other <sup>5</sup>	15,087	12,575	10,246	11,131	10,912	13,633	12,806
Total Other Expenses	21,702	19,651	16,495	17,139	17,317	20,541	21,862
<b>Refining/Marketing Operating Income</b>	-1,127	11,776	23,146	31,337	35,561	26,714	6,487
<b>Miscellaneous Revenue &amp; Expense</b> <sup>6</sup>	1,180	1,596	2,291	3,571	3,657	5,822	2,576
<b>Less Income Taxes</b>	79	4,802	8,497	12,166	13,710	10,667	5,724
<b>Refining/Marketing Net Income</b>	-1,590	8,570	17,036	22,741	25,543	22,862	3,339

<sup>1</sup>Represents reported cost of raw materials processed at refineries, less any profit from raw material trades or exchanges by refining/marketing.

<sup>2</sup>Excludes costs of nonfuel goods and services and tires, batteries, and accessories (TBA).

<sup>3</sup>Dollars per barrel of refined product sold.

<sup>4</sup>Includes revenues from transportation services supplied (non-federally regulated), TBA sales, and miscellaneous.

<sup>5</sup>Includes general and administrative expenses, research and development costs, costs of transportation services supplied to others, and expenses for TBA.

<sup>6</sup>Includes other revenue and expense items, extraordinary items, and cumulative effect of accounting changes.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T28. U.S. Petroleum Refining/Marketing General Operating Expenses, 2002-2008**  
(Million 2008 Dollars)

General Operating Expenses	2002	2003	2004	2005	2006	2007	2008
<b>Raw Material Supply</b>							
Raw Material Purchases	268,288	275,217	355,130	458,188	471,890	465,446	634,654
Other Raw Material Supply Expense	5,323	3,710	4,519	7,642	4,971	5,504	8,463
Total Raw Material Supply Expense	273,611	278,927	359,649	465,829	476,862	470,951	643,117
Less: Cost of Raw Materials Input To Refining	142,723	168,829	225,272	298,054	340,140	353,866	484,744
Net Raw Material Supply	130,888	110,098	134,377	167,775	136,722	117,084	158,373
<b>Refining</b>							
Raw Materials Input to Refining	142,723	168,829	225,272	298,054	340,140	353,866	484,744
Less: Raw Material Used as Refinery Fuel	9,367	9,802	9,126	10,870	10,623	10,069	13,907
Refinery Process Energy Expense	10,809	13,160	13,412	16,123	14,241	14,441	19,502
Other Refining Operating Expenses	20,561	18,610	18,137	19,571	21,230	23,387	30,249
Refined Product Purchases	121,875	131,455	170,140	214,329	214,702	207,874	257,310
Other Refined Product Supply Expenses	14,794	11,289	6,834	8,652	10,697	8,558	12,448
Total Refining	301,393	333,541	424,668	545,859	590,386	598,058	790,346
<b>Marketing</b>							
Cost of Other Products Sold	10,219	8,147	6,022	7,253	6,021	9,915	9,190
Other Marketing Expenses	16,357	12,634	14,459	13,421	11,536	12,520	12,971
Subtotal	26,575	20,781	20,481	20,675	17,557	22,435	22,161
Expense of Transport Services for Others	517	644	377	331	264	309	291
Total Marketing	27,092	21,426	20,858	21,006	17,820	22,744	22,452
<b>Total U.S. Refining/Marketing Segment</b>							
<b>General Operating Expenses</b>	459,373	465,065	579,903	734,639	744,929	737,886	971,171

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T29. U.S. and Foreign Petroleum Refining Statistics, 2002-2008**

	2002	2003	2004	2005	2006	2007	2008
<b>U.S. Refining</b>							
Runs to Stills	(thousand barrels per calendar day)						
At Own Refineries	13,307	13,278	13,619	13,588	13,366	12,742	13,054
By Refineries of Others	0	0	0	0	0	0	0
Total Runs to Stills	13,307	13,278	13,619	13,588	13,366	12,742	13,054
Refinery Output at Own Refineries and Refineries of Others							
Reformulated Motor Gasoline	1,991	1,726	1,707	1,723	1,066	987	849
Oxygenated Motor Gasoline	552	515	574	283	109	178	197
Other Motor Gasoline	4,420	4,656	4,770	4,960	5,606	5,271	5,232
Total Motor Gasoline	6,963	6,897	7,051	6,966	6,781	6,436	6,278
Distillate Fuels	4,140	4,370	4,565	4,621	4,520	4,479	4,836
Other Refined Products	3,573	3,320	3,466	3,452	3,425	3,253	3,405
Total Refinery Output	14,676	14,587	15,082	15,039	14,726	14,168	14,519
Refinery Capacity at End of Year	14,198	14,279	14,409	14,532	14,652	14,101	14,880
	(number of refineries)						
Number of Wholly-Owned Refineries	84	79	79	76	76	71	75
<b>Foreign Refining</b>							
Runs to Stills	(thousand barrels per calendar day)						
At Own Refineries	4,778	4,550	4,886	5,043	5,094	4,900	4,652
By Refineries of Others	0	0	0	0	0	0	0
Total Runs to Stills	4,778	4,550	4,886	5,043	5,094	4,900	4,652
Refinery Output at Own Refineries							
Motor Gasoline	1,427	1,400	1,445	1,500	1,459	1,448	1,298
Distillate Fuels	2,041	1,971	2,054	2,088	2,132	2,080	1,993
Other Refined Products	1,405	1,251	1,406	1,546	1,573	1,480	1,707
Total Refinery Output at Own Refineries	4,873	4,622	4,905	5,134	5,164	5,008	4,998
Refinery Output at Refineries of Others							
Motor Gasoline	0	0	0	0	0	0	0
Distillate Fuels	0	0	0	0	0	0	0
Other Refined Products	0	0	0	0	0	0	0
Total Refinery Output at Refineries of Others	0	0	0	0	0	0	0
Total Refinery Output	4,873	4,622	4,905	5,134	5,164	5,008	4,998
Refinery Capacity at End of Year	5,642	5,374	5,698	5,633	5,924	5,571	5,461
	(number of refineries)						
Number of Wholly-Owned Refineries	22	19	19	19	20	22	19
Number of Partially-Owned Refineries	19	19	19	19	19	17	W

W = data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T30. U.S. and Foreign Refinery Output and Capacity: FRS and Industry, 2008**  
(Thousand Barrels per Day)

Refined Product Statistics <sup>1</sup>	FRS Companies				Total Industry	FRS Percent of Industry
	All FRS	Top Four	Five through Twelve <sup>2</sup>	All Other <sup>2</sup>		
United States						
Refinery Output Volume <sup>3</sup>	14,519	5,902	4,147	4,470	17,561	82.7
Percent Gasoline						
Reformulated/Oxygenated	7.2	5.7	5.9	10.4	17.1	34.8
Other	36.0	35.7	41.0	31.9	31.9	93.4
Percent Distillate	33.3	34.3	31.1	34.0	25.2	109.5
Percent Other	23.5	24.3	22.0	23.7	25.8	75.0
Refinery Capacity						
Years Change (Net)	779	7	-95	867	77	1,011.7
At Year End	14,880	6,183	4,159	4,538	18,249	81.5
Utilization Rate <sup>4</sup>	90.1	84.3	89.6	99.3	96.4	NM
Foreign						
Refinery Output Volume <sup>3</sup>	4,998	4,622	(2)	376	NA	NM
Percent Gasoline	26.0	26.0	(2)	26.1	NA	NM
Percent Distillate	39.9	39.9	(2)	39.9	NA	NM
Percent Other	34.2	34.2	(2)	34.0	NA	NM
Refinery Capacity						
Years Change (Net)	-110	-90	(2)	-20	806	-13.6
At Year End	5,461	4,991	(2)	470	71,006	7.7
Utilization Rate <sup>4</sup>	84.3	85.0	(2)	77.7	85.7	NM

<sup>1</sup>U.S. FRS and U.S. industry data include operations in Puerto Rico and the U.S. Virgin Islands. Foreign FRS and foreign industry data exclude operations in Puerto Rico and the U.S. Virgin Islands.

<sup>2</sup>For foreign FRS, the "Five through Twelve" and "All Other" groups are combined to avoid disclosure.

<sup>3</sup>For FRS companies, includes refinery output at own refineries for own account and at others' refineries for own account.

<sup>4</sup>Defined as average daily crude runs at own refineries, for own account, and for account of others, divided by average daily crude distillation capacity.

NM = Not meaningful.

NA = Not available.

Note: Sum of components may not equal total due to independent rounding.

Refinery Report) and EIA-810 (Monthly Refinery Report); see *Petroleum Supply Annual*. Industry data, Foreign - Refinery Capacity:

FRS companies data - Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T31. U.S. and Foreign Refining/Marketing Sources and Dispositions of Crude Oil and Natural Gas Liquids, 2002-2008**  
(million barrels)

	2002	2003	2004	2005	2006	2007	2008
<b>U.S. Refining/Marketing</b>							
<b>Sources</b>							
Acquisitions from U.S. Production Segment	1,368.0	1,195.0	982.0	972.0	916.0	810.0	750.0
Purchases from Other U.S. Segments and Unconsolidated Affiliates	1,709.0	1,130.0	646.0	456.0	381.0	333.0	351.0
Purchases from Third Parties	4,219.0	5,059.0	5,392.0	5,623.0	5,051.0	4,480.0	4,673.0
Net Transfers from Foreign Refining/Marketing Segment	631.0	738.0	918.0	732.0	658.0	605.0	580.0
<b>Total Sources</b>	<b>7,926.0</b>	<b>8,122.0</b>	<b>7,938.0</b>	<b>7,784.0</b>	<b>7,005.0</b>	<b>6,228.0</b>	<b>6,355.0</b>
<b>Dispositions</b>							
Net Change in Inventories	-28.0	30.0	19.0	4.0	-12.0	-4.0	-43.0
Input to Refineries	4,715.0	4,791.0	4,967.0	4,937.0	4,984.0	4,664.0	4,808.0
<b>Sales to:</b>							
Unaffiliated Third Parties	3,056.0	2,930.0	2,833.0	2,726.0	1,958.0	1,522.0	W
Other Segments Excluding Foreign Refining/Marketing	183.0	372.0	119.0	117.0	75.0	46.0	W
<b>Total Dispositions</b>	<b>7,926.0</b>	<b>8,122.0</b>	<b>7,938.0</b>	<b>7,784.0</b>	<b>7,005.0</b>	<b>6,228.0</b>	<b>6,355.0</b>
<b>Foreign Refining/Marketing</b>							
<b>Sources</b>							
Acquisitions from Foreign Production Segment	1,590.0	1,502.0	1,635.0	1,635.0	1,674.0	1,572.0	1,479.0
<b>Purchases</b>							
Other Foreign Segments	W	W	W	W	W	W	W
Unconsolidated Affiliates	W	W	W	W	W	W	W
<b>Unaffiliated Third Parties</b>							
Foreign Access	W	W	W	W	W	W	W
Foreign Governments (Open Market)	W	W	W	W	W	W	W
Other Unaffiliated Third Parties	1,626.0	1,816.0	1,953.0	1,923.0	1,932.0	1,924.0	1,855.0
Net Transfers to U.S. Refining/Marketing Segment	-631.0	-738.0	-918.0	-732.0	-658.0	-605.0	-580.0
<b>Total Sources</b>	<b>3,287.0</b>	<b>3,328.0</b>	<b>3,624.0</b>	<b>3,724.0</b>	<b>3,744.0</b>	<b>3,552.0</b>	<b>3,474.0</b>
<b>Dispositions</b>							
Net Change in Inventories	0.0	17.0	-4.0	1.0	-7.0	1.0	-2.0
Input to Refineries	1,639.0	1,646.0	1,768.0	1,805.0	1,838.0	1,816.0	1,689.0
Sales	1,647.0	1,666.0	1,860.0	1,918.0	1,912.0	1,735.0	1,787.0
<b>Total Dispositions</b>	<b>3,287.0</b>	<b>3,328.0</b>	<b>3,624.0</b>	<b>3,724.0</b>	<b>3,744.0</b>	<b>3,552.0</b>	<b>3,474.0</b>

W = Data withheld to avoid disclosure.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T32. U.S. Purchases and Sales of Oil, Natural Gas, Other Raw Materials, and Refined Products, 2002-2008**

	2002	2003	2004	2005	2006	2007	2008
<b>Purchases</b>							
U.S. Refining/Marketing Segment	Values (million 2008 dollars)						
Raw Materials							
Crude Oil and NGL	219,187	259,394	332,328	433,689	441,996	431,509	595,287
Natural Gas	39,739	2,639	1,405	1,926	4,517	3,949	6,281
Other Raw Materials	9,362	13,184	21,397	22,573	25,377	29,988	33,086
Total Raw Materials	268,288	275,217	355,130	458,188	471,890	465,446	634,654
Refined Products							
Motor Gasoline	71,730	78,722	107,515	129,981	130,965	131,079	153,377
Distillate Fuels	31,829	31,654	37,354	55,847	56,460	57,193	74,706
Other Refined Products	18,316	21,080	25,271	28,501	27,277	19,602	29,227
Total Refined Products	121,875	131,455	170,140	214,329	214,702	207,874	257,310
U.S. Production Segment							
Crude Oil and NGL	849	1,410	1,597	W	W	0	0
Natural Gas	13,879	2,183	0	0	0	0	0
Total Raw Materials	14,728	3,593	1,597	W	W	0	0
<b>Sales</b>							
U.S. Refining/Marketing Segment							
Raw Materials							
Crude Oil and NGL	88,652	106,035	125,516	161,369	129,951	108,011	154,426
Natural Gas	38,724	W	-	-	-	-	-
Other Raw Materials	1,112	W	3,835	2,563	W	3,359	2,176
Total Raw Materials	128,487	110,626	129,351	163,932	W	111,371	156,602
Refined Products							
Motor Gasoline	188,437	210,214	276,074	330,116	359,294	356,499	409,983
Distillate Fuels	88,484	99,162	128,613	183,538	200,884	209,312	298,309
Other Refined Products	43,625	53,894	61,808	79,091	83,208	83,180	103,857
Total Refined Products	320,546	363,270	466,494	592,746	643,386	648,992	812,149
U.S. Production Segment							
Crude Oil and NGL	36,468	33,251	47,002	56,837	63,658	67,212	86,831
Natural Gas	47,245	45,666	48,411	59,435	52,195	49,745	66,802
Total Raw Materials	83,714	78,918	95,414	116,273	115,853	116,957	153,633
<b>Purchases</b>							
U.S. Refining/Marketing Segment	Volumes						
Raw Materials							
Crude Oil and NGL (million barrels)	7,926	8,074	7,904	7,784	7,005	6,228	6,355
Natural Gas (billion cubic feet)	10,458	441	224	240	661	613	769
Refined Products (million barrels)							
Motor Gasoline	1,886	1,811	1,896	1,763	1,549	1,435	1,446
Distillate Fuels	952	780	689	723	664	621	648
Other Refined Products	583	542	572	494	345	257	312
Total Refined Products	3,420	3,133	3,157	2,980	2,558	2,313	2,406
U.S. Production Segment							
Crude Oil and NGL (million barrels)	37	45	44	W	W	0	0
Natural Gas (billion cubic feet)	3,956	365	0	0	0	0	0
<b>Sales</b>							
U.S. Refining/Marketing Segment							
Raw Materials							
Crude Oil and NGL (million barrels)	3,239	3,226	2,918	2,843	2,033	1,568	1,591
Natural Gas (billion cubic feet)	9,783	243	-	-	-	-	-
Refined Products (million barrels)							
Motor Gasoline	4,598	4,354	4,502	4,278	4,082	3,768	3,759
Distillate Fuels	2,465	2,288	2,321	2,349	2,297	2,244	2,382
Other Refined Products	1,332	1,422	1,506	1,534	1,388	1,309	1,296
Total Refined Products	8,395	8,064	8,330	8,161	7,766	7,322	7,437
U.S. Production Segment							
Crude Oil and NGL (million barrels)	1,433	1,104	1,200	1,077	1,097	1,050	1,026
Natural Gas (billion cubic feet)	13,078	8,466	7,959	7,556	7,781	8,217	8,611

Note: Beginning in 2003, purchases of natural gas by the Petroleum line of business are for own use only, and sales of natural gas are to the downstream natural gas line of business.

- = Not reported.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).

**Table T33. U.S. Refining/Marketing Dispositions of Refined Products by Channel of Distribution, 2002-2008**

U.S. Dispositions	2002	2003	2004	2005	2006	2007	2008
<b>Motor Gasoline</b>							
Values (million 2008 dollars)							
Intersegment Sales	4,122	1,960	4,517	4,707	5,133	4,635	5,821
U.S. Third-Party Sales							
Wholesale-Resellers	80,759	115,051	137,307	167,661	182,526	181,400	219,324
Company Operated Automotive Outlets	21,977	24,423	39,450	42,291	46,216	43,094	40,564
Company Lessee and Open Automotive Outlets	49,195	41,234	58,212	65,815	74,330	76,417	88,525
Other (Industrial, Commercial and Other Retail)	32,383	27,546	36,588	49,643	51,089	50,954	55,749
Total Third-Party Sales	184,315	208,254	271,558	325,409	354,161	351,864	404,162
Total Motor Gasoline Sales	188,437	210,214	276,074	330,116	359,294	356,499	409,983
<b>Distillate Fuels</b>							
Intersegment Sales	2,811	1,219	2,401	2,874	3,556	3,654	6,158
Third-Party Sales	85,673	97,943	126,211	180,664	197,328	205,658	292,151
Total Distillate Fuels Sales	88,484	99,162	128,613	183,538	200,884	209,312	298,309
<b>Other Refined Products</b>							
Intersegment Sales	5,269	4,882	7,817	10,247	10,823	10,955	12,049
Third-Party Sales	38,356	49,012	53,991	68,844	72,384	72,225	91,808
Total Other Refined Products Sales	43,625	53,894	61,808	79,091	83,208	83,180	103,857
<b>Total U.S. Refined Products</b>							
Intersegment Sales	12,202	8,061	14,735	17,828	19,513	19,245	24,028
Third-Party Sales	308,345	355,209	451,760	574,918	623,873	629,747	788,121
Total U.S. Refined Products Sales	320,546	363,270	466,494	592,746	643,386	648,992	812,149
<b>Motor Gasoline</b>							
Volumes (million barrels)							
Intersegment Sales	101	45	79	64	60	50	55
U.S. Third-Party Sales							
Wholesale-Resellers	2,045	2,508	2,344	2,221	2,119	1,961	2,065
Company Operated Automotive Outlets	464	432	534	504	487	423	339
Company Lessee and Open Automotive Outlets	1,167	797	909	845	828	795	796
Other (Industrial, Commercial and Other Retail)	820	572	636	644	587	540	505
Total Third-Party Sales	4,496	4,309	4,423	4,214	4,022	3,719	3,705
Total Motor Gasoline Sales	4,598	4,354	4,502	4,278	4,082	3,768	3,759
<b>Distillate Fuels</b>							
Intersegment Sales	85	30	45	39	43	40	51
Third-Party Sales	2,380	2,258	2,276	2,309	2,254	2,204	2,331
Total Distillate Fuels Sales	2,465	2,288	2,321	2,349	2,297	2,244	2,382
<b>Other Refined Products</b>							
Intersegment Sales	162	125	160	176	153	145	133
Third-Party Sales	1,170	1,298	1,346	1,358	1,235	1,164	1,163
Total Other Refined Products Sales	1,332	1,422	1,506	1,534	1,388	1,309	1,296
<b>Total U.S. Refined Products</b>							
Intersegment Sales	348	200	285	279	256	235	239
Third-Party Sales	8,046	7,864	8,045	7,881	7,511	7,087	7,199
Total U.S. Refined Products Sales	8,395	8,064	8,330	8,161	7,766	7,322	7,437
<b>Number of Active Automotive Outlets at Year End</b>							
Number of Automotive Outlets							
Company Operated	9,745	8,804	8,848	8,585	7,927	7,642	6,937
Lessee Dealers	9,347	8,746	8,223	6,746	6,123	5,694	5,329
Open Dealers	28,056	26,657	27,183	27,252	24,747	24,532	23,006
Total Outlets	47,148	44,207	44,254	42,583	38,797	37,868	35,272
Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).							



**Table T34. Sales of U.S. Refined Products, by Volume and Price, 2007-2008**  
(Million Barrels and Dollars per Barrel)

Product Distribution Channel	All FRS		Top Four		Five through Twelve		All Other	
	Volume	Price	Volume	Price	Volume	Price	Volume	Price
<b>Gasoline</b>								
Intra-Company Sales								
2008	54.8	106.14	24.4	105.4	30.5	106.8	0.0	0.00
2007	49.8	93.14	W	W	W	W	0.0	0.00
Percent Change	10.2	14.0	W	W	W	W	0.0	0.0
Wholesale/Resellers								
2008	2,064.9	106.22	832.8	106.27	567.7	106.92	664.3	105.55
2007	1,961.4	92.49	882.4	93.12	611.5	92.45	467.4	91.34
Percent Change	5.3	14.8	-5.6	14.1	-7.2	15.7	42.1	15.6
Dealer-Operated Outlets								
2008	796.4	111.16	424.7	111.42	(2)	(2)	371.6	110.86
2007	794.8	96.15	391.7	97.17	(2)	(2)	403.1	95.15
Percent Change	0.2	15.6	8.4	14.7	(2)	(2)	-7.8	19.2
Company-Operated Outlets								
2008	338.5	119.82	114.9	120.74	(2)	(2)	223.7	119.35
2007	422.6	101.97	177.1	100.60	(2)	(2)	245.5	101.93
Percent Change	-19.9	17.5	-35.2	20.0	(2)	(2)	-8.9	15.9
Other <sup>1</sup>								
2008	504.8	110.43	317.4	112.29	(2)	(2)	187.5	107.29
2007	539.9	94.38	351.4	97.25	(2)	(2)	188.5	89.02
Percent Change	-6.5	17.0	-9.7	15.5	(2)	(2)	-0.5	20.5
<b>Total Gasoline</b>								
2008	3,759.5	109.05	1,714.2	109.62	963.7	108.48	1,081.6	108.68
2007	3,768.5	94.60	1,819.5	95.50	1,029.7	93.78	919.2	93.75
Percent Change	-0.2	15.3	-5.8	14.8	-6.4	15.7	17.7	15.9
<b>Distillate</b>								
2008	2,381.9	125.24	1,039.6	125.07	604.4	125.57	737.9	125.21
2007	2,244.4	93.26	1,005.1	92.95	599.8	93.59	639.6	93.42
Percent Change	6.1	34.3	3.4	34.6	0.8	34.2	15.4	36.9
<b>All Other Products</b>								
2008	1,296.0	80.14	579.6	80.93	306.9	72.11	409.5	85.03
2007	1,309.3	63.53	640.1	65.83	315.9	55.25	353.3	66.76
Percent Change	-1.0	26.1	-9.4	22.9	-2.9	30.5	15.9	27.4
<b>Total Refined Products</b>								
2008	7,437.3	109.20	3,333.4	109.45	1,874.9	108.04	2,228.9	109.80
2007	7,322.2	88.63	3,464.7	89.28	1,945.4	87.46	1,912.1	88.65
Percent Change	1.6	25.8	-3.8	22.6	-3.6	23.5	16.6	23.9

<sup>1</sup>Includes direct sales to industrial and commercial customers and sales to unconsolidated affiliates.

<sup>2</sup>Five through Twelve and All Other groups combined for dealer-operated outlets, company-operated outlets, and other, to avoid disclosure.

W = Data withheld to avoid disclosure.

Note: Sum of components may not equal total due to independent rounding.

Source: Energy Information Administration, Form EIA-28 (Financial Reporting System).





